



October 2, 2003

State of Utah  
Division of Oil, Gas & Mining  
Attn: Diana Mason  
1594 West North Temple - Suite 1210  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

RE: Applications for Permit to Drill: Blackjack Federal 2-10-9-17, 4-10-9-17, 11-10-9-17, 12-10-9-17, 13-10-9-17, 15-10-9-17, and Federal 9-10-9-17.

Dear Diana:

Enclosed find APD's on the above referenced wells. The 4-10-9-17 and 13-10-9-17 are Exception Locations. You will be receiving Exception Locations Letters from our Land Department shortly. If you have any questions, feel free to give either Brad or myself a call.

Sincerely,

Mandie Crozier  
Regulatory Specialist

mc  
enclosures

RECEIVED  
OCT 03 2003  
DIV. OF OIL, GAS & MINING

001

Form 3160-3  
(September 2001)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED  
OMB No. 1004-0136  
Expires January 31, 2004

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>UTU-70821</b>
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator <b>Inland Production Company</b>		7. If Unit or CA Agreement, Name and No. <b>BlackJack Unit</b>
3a. Address <b>Route #3 Box 3630, Myton UT 84052</b>		8. Lease Name and Well No. <b>BlackJack Federal 13-10-9-17</b>
3b. Phone No. (include area code) <b>(435) 646-3721</b>		9. API Well No. <b>43-013-32504</b>
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface SW/SW 308' FSL 692' FWL <b>44323414 40.03710</b> At proposed prod. zone <b>5850324 109.99702</b>		10. Field and Pool, or Exploratory <b>Monument Butte</b>
14. Distance in miles and direction from nearest town or post office* <b>Approximatley 16.1 miles southeast of Myton, Utah</b>		11. Sec., T., R., M., or Blk. and Survey or Area <b>SW/SW Sec. 10, T9S R17E</b>
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) Approx. 308' f/lse, 308' f/unit	16. No. of Acres in lease <b>240.00</b>	17. Spacing Unit dedicated to this well <b>40 Acres</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 1729'	19. Proposed Depth <b>6500'</b>	20. BLM/BIA Bond No. on file <b>#4488944</b>
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>5210' GR</b>	22. Approximate date work will start* <b>1st Quarter 2004</b>	23. Estimated duration Approximately seven (7) days from spud to rig release.

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification.
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature <i>Manche Crozier</i>	Name (Printed/Typed) <b>Manche Crozier</b>	Date <b>10/2/03</b>
Title <b>Regulatory Specialist</b>		
Approved by (Signature) <i>Bradley G. Hill</i>	Name (Printed/Typed) <b>BRADLEY G. HILL</b>	Date <b>10-14-03</b>
Title <b>ENVIRONMENTAL SCIENTIST III</b>		

**Federal Approval of this Action is Necessary**

Application approval does not warrant or certify the the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on reverse)

RECEIVED

OCT 03 2003

DIV. OF OIL, GAS &amp; MINING

SCALE: 1" = 1000'	SURVEYED BY: D.J.S.
DATE: 8-19-03	DRAWN BY: R.V.C.
NOTES:	FILE #

## United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:

3160

(UT-922)

October 14, 2003

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2003 Plan of Development Blackjack Unit,  
Duchesne County, Utah.

Pursuant to email between Diana Mason, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2003 within the Blackjack Unit, Duchesne County, Utah.

API #	WELL NAME	LOCATION
-------	-----------	----------

(Proposed PZ Green River)

43-013-32500	Blackjack Federal	16-03-9-17 Sec 3 T09S R17E 0545 FSL 0596 FEL
43-013-32501	Blackjack Federal	15-03-9-17 Sec 3 T09S R17E 0762 FSL 1838 FEL
43-013-32503	Blackjack Federal	15-10-9-17 Sec 10 T09S R17E 0575 FSL 2082 FEL
43-013-32504	Blackjack Federal	13-10-9-17 Sec 10 T09S R17E 0300 FSL 0692 FWL
43-013-32505	Blackjack Federal	12-10-9-17 Sec 10 T09S R17E 1999 FSL 0730 FWL
43-013-32506	Blackjack Federal	11-10-9-17 Sec 10 T09S R17E 1813 FSL 2068 FWL
43-013-32507	Blackjack Federal	4-10-9-17 Sec 10 T09S R17E 0398 FNL 0520 FWL
43-013-32508	Blackjack Federal	2-10-9-17 Sec 10 T09S R17E 0660 FNL 1980 FEL

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File - Blackjack Unit  
Division of Oil Gas and Mining  
Agr. Sec. Chron  
Fluid Chron

MCoulthard:mc:10-14-3

INLAND PRODUCTION COMPANY  
BLACKJACK FEDERAL #13-10-9-17  
SW/SW SECTION 10, T9S, R17E  
DUCHESNE COUNTY, UTAH

ONSHORE ORDER NO. 1

**DRILLING PROGRAM**

1. **GEOLOGIC SURFACE FORMATION:**

Uinta formation of Upper Eocene Age

2. **ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS:**

Uinta	0' – 1640'
Green River	1640'
Wasatch	5850'

3. **ESTIMATED DEPTHS OF ANTICIPATED WATER, OIL, GAS OR MINERALS:**

Green River Formation 1640' – 6500' - Oil

4. **PROPOSED CASING PROGRAM**

Please refer to the Monument Butte Field Standard Operation Procedure (SOP).

5. **MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:**

Please refer to the Monument Butte Field SOP. See Exhibit "C".

6. **TYPE AND CHARACTERISTICS OF THE PROPOSED CIRCULATION MUDS:**

Please refer to the Monument Butte Field SOP.

7. **AUXILIARY SAFETY EQUIPMENT TO BE USED:**

Please refer to the Monument Butte Field SOP.

8. **TESTING, LOGGING AND CORING PROGRAMS:**

Please refer to the Monument Butte Field SOP.

9. **ANTICIPATED ABNORMAL PRESSURE OR TEMPERATURE:**

The anticipated maximum bottom hole pressure is 2000 psi. It is not anticipated that abnormal temperatures will be encountered.

10. **ANTICIPATED STARTING DATE AND DURATION OF THE OPERATIONS:**

Please refer to the Monument Butte Field SOP.

**INLAND PRODUCTION COMPANY  
BLACKJACK FEDERAL #13-10-9-17  
SW/SW SECTION 10, T9S, R17E  
DUCHESNE COUNTY, UTAH**

**ONSHORE ORDER NO. 1**

**MULTI-POINT SURFACE USE & OPERATIONS PLAN**

**1. EXISTING ROADS**

See attached Topographic Map "A"

To reach Inland Production Company well location site Blackjack Federal #13-10-9-17 located in the SW 1/4 SW 1/4 Section 10, T9S, R17E, Duchesne County, Utah:

Proceed southwesterly out of Myton, Utah along Highway 40 - 1.6 miles  $\pm$  to the junction of this highway and UT State Hwy 53; proceed southeasterly along Hwy 53 - 13.3 miles  $\pm$  to it's junction with an existing road to the south; proceed southerly and then southwesterly - 1.2 miles  $\pm$  to it's junction with the beginning of the proposed access road; proceed northwesterly along the proposed access road 460'  $\pm$  to the proposed well location.

**2. PLANNED ACCESS ROAD**

See Topographic Map "B" for the location of the proposed access road.

**3. LOCATION OF EXISTING WELLS**

Refer to Exhibit "B".

**4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES**

Please refer to the Monument Butte Field Standard Operating Procedure (SOP).

**5. LOCATION AND TYPE OF WATER SUPPLY**

Please refer to the Monument Butte Field SOP. See Exhibit "A".

**6. SOURCE OF CONSTRUCTION MATERIALS**

Please refer to the Monument Butte Field SOP.

**7. METHODS FOR HANDLING WASTE DISPOSAL**

Please refer to the Monument Butte Field SOP.

**8. ANCILLARY FACILITIES**

Please refer to the Monument Butte Field SOP.

**9. WELL SITE LAYOUT**

See attached Location Layout Diagram.

10. **PLANS FOR RESTORATION OF SURFACE**

Please refer to the Monument Butte Field SOP.

11. **SURFACE OWNERSHIP** - Bureau Of Land Management

12. **OTHER ADDITIONAL INFORMATION**

The Archaeological Resource Survey and Paleontological Resource Survey for this area are attached. MOAC Report #03-62, 6/20/03. Paleontological Resource Survey prepared by, Wade E. Miller, 5/8/03. See attached report cover pages, Exhibit "D".

Inland Production Company requests a 60' ROW for the Blackjack Federal #13-10-9-17 to allow for construction of a 6" gas gathering line, and a 3" poly fuel gas line. Both lines will tie in to the existing pipeline infrastructure. Refer to Topographic Map "C." For a ROW plan of development, please refer to the Monument Butte Field SOP.

Inland Production Company also requests a 60' ROW be granted for the Blackjack Federal #13-10-9-17 to allow for construction of a 3" steel water injection line and a 3" poly water return line. Refer to Topographic Map "C." For a ROW plan of development, please refer to the Monument Butte Field SOP.

**Water Disposal**

Please refer to the Monument Butte Field SOP.

**Reserve Pit Liner**

A felt pad and 12 mil liner is required. Please refer to the Monument Butte Field SOP.

**Location and Reserve Pit Reclamation**

Please refer to the Monument Butte Field SOP.

The following seed mixture will be used on the topsoil stockpile, the recontoured surface of the reserve pit, and for final reclamation: (All poundages are in pure live seed)

Gardner Saltbush	<i>Atriplex gardneri</i>	4 lbs/acre
Galleta Grass	<i>Hilaria jamesii</i>	4 lbs/acre
Kochia Americana		4 lbs/acre

13. **LESSEE'S OR OPERATORS REPRESENTATIVE AND CERTIFICATION**

Representative

Name: Brad Mecham  
Address: Route #3 Box 3630  
Myton, UT 84052  
Telephone: (435) 646-3721

Certification

Please be advised that INLAND PRODUCTION COMPANY is considered to be the operator of well #13-10-9-17 SW/SW Section 10, Township 9S, Range 17E: Lease UTU-70821

Duchesne County, Utah: and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond coverage is provided by Hartford Accident #4488944.

I hereby certify that the proposed drillsite and access route have been inspected, and I am familiar with the conditions which currently exist; that the statements made in this plan are true and correct to the best of my knowledge; and that the work associated with the operations proposed here will be performed by Inland Production Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

10/2/03

Date

Mandie Crozier

Mandie Crozier

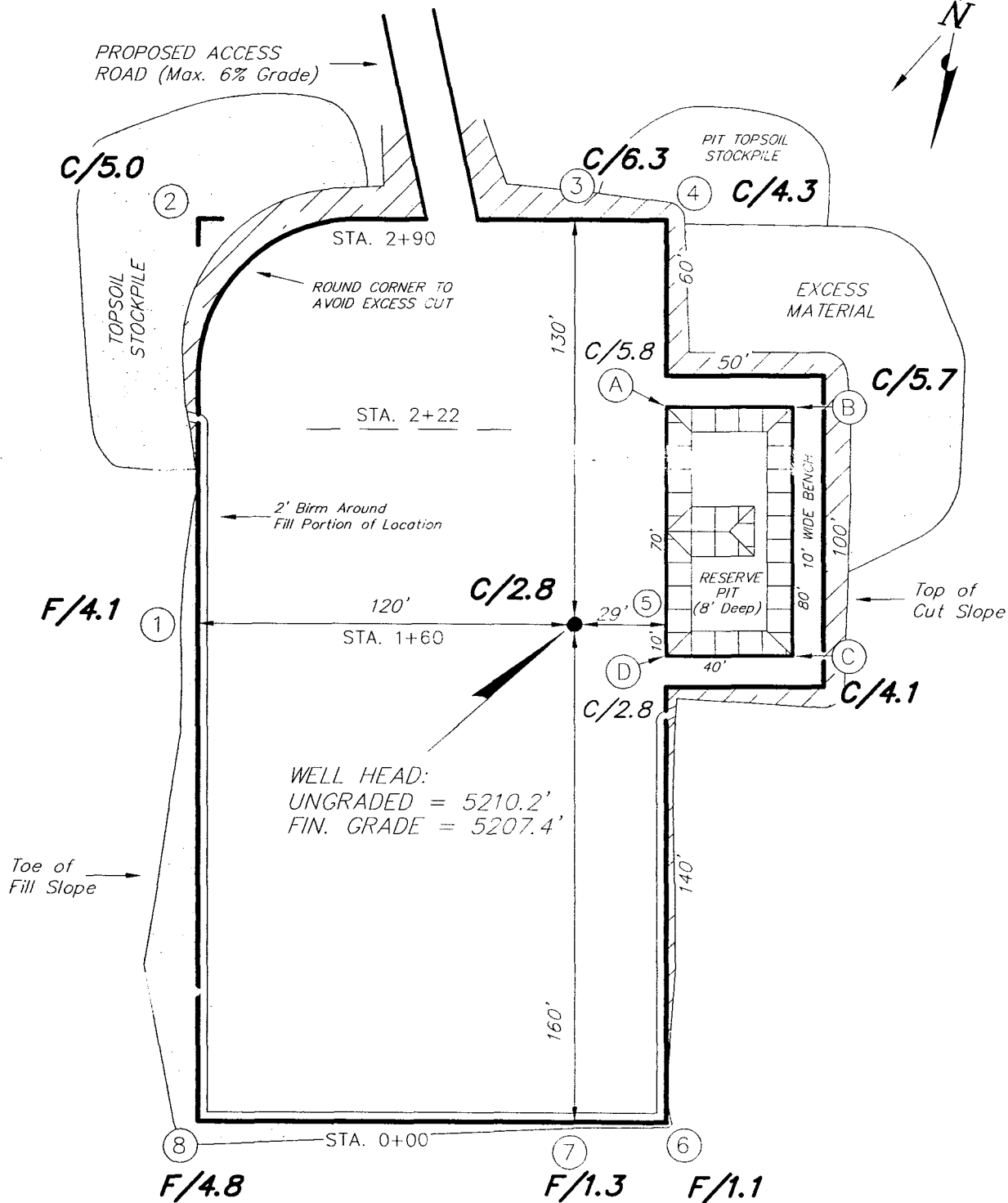
Regulatory Specialist



# INLAND PRODUCTION COMPANY

## BLACKJACK UNIT 13-10

Section 10, T9S, R17E, S.L.B.&M.



### REFERENCE POINTS

170' EAST = 5208.3'

220' EAST = 5206.2'

SURVEYED BY: D.J.S.

SCALE: 1" = 50'

DRAWN BY: R.V.C.

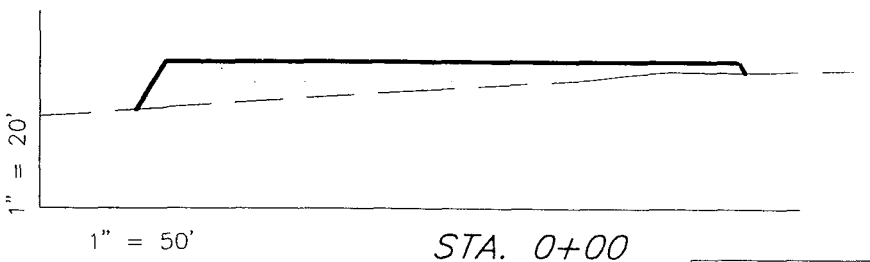
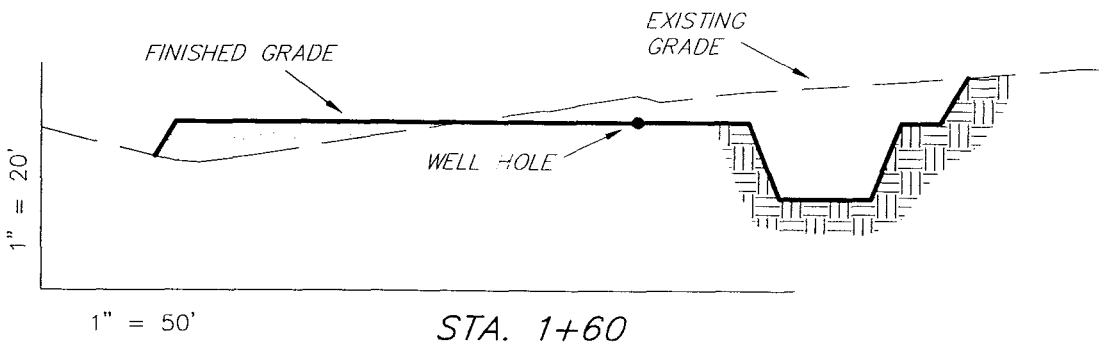
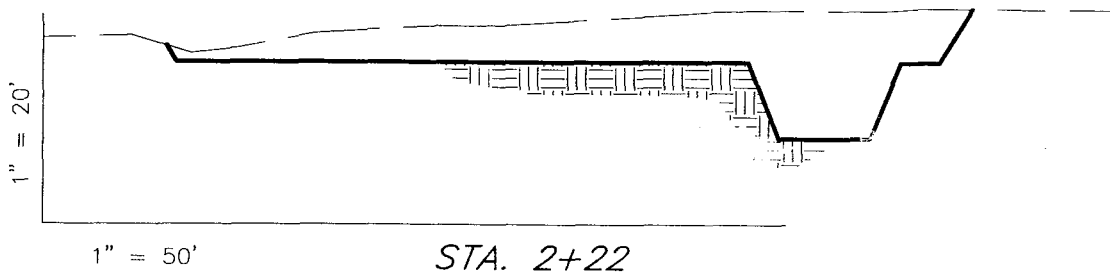
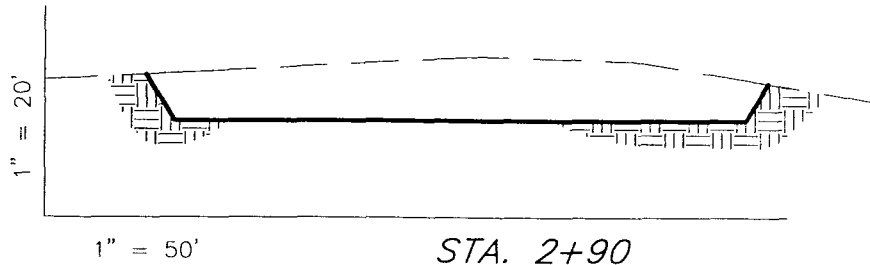
DATE: 4-19-03

Tri State  
Land Surveying, Inc.

(435) 781-2501

180 NORTH VERNAL AVE. VERNAL, UTAH 84078

**INLAND PRODUCTION COMPANY**  
**CROSS SECTIONS**  
**BLACKJACK UNIT 13-10**



NOTE:  
UNLESS OTHERWISE NOTED  
ALL CUT/FILL SLOPES ARE  
AT 1.5:1

**ESTIMATED EARTHWORK QUANTITIES**  
(Expressed in Cubic Yards)

ITEM	CUT	FILL	6" TOPSOIL	EXCESS
PAD	3,410	3,400	Topsoil is not included in Pad Cut	10
PIT	640	0		640
TOTALS	4,050	3,400	890	650

SURVEYED BY: D.J.S.

SCALE: 1" = 50'

DRAWN BY: R.V.C.

DATE: 4-19-03

**Tri State**  
**Land Surveying, Inc.**

(435) 781-2501

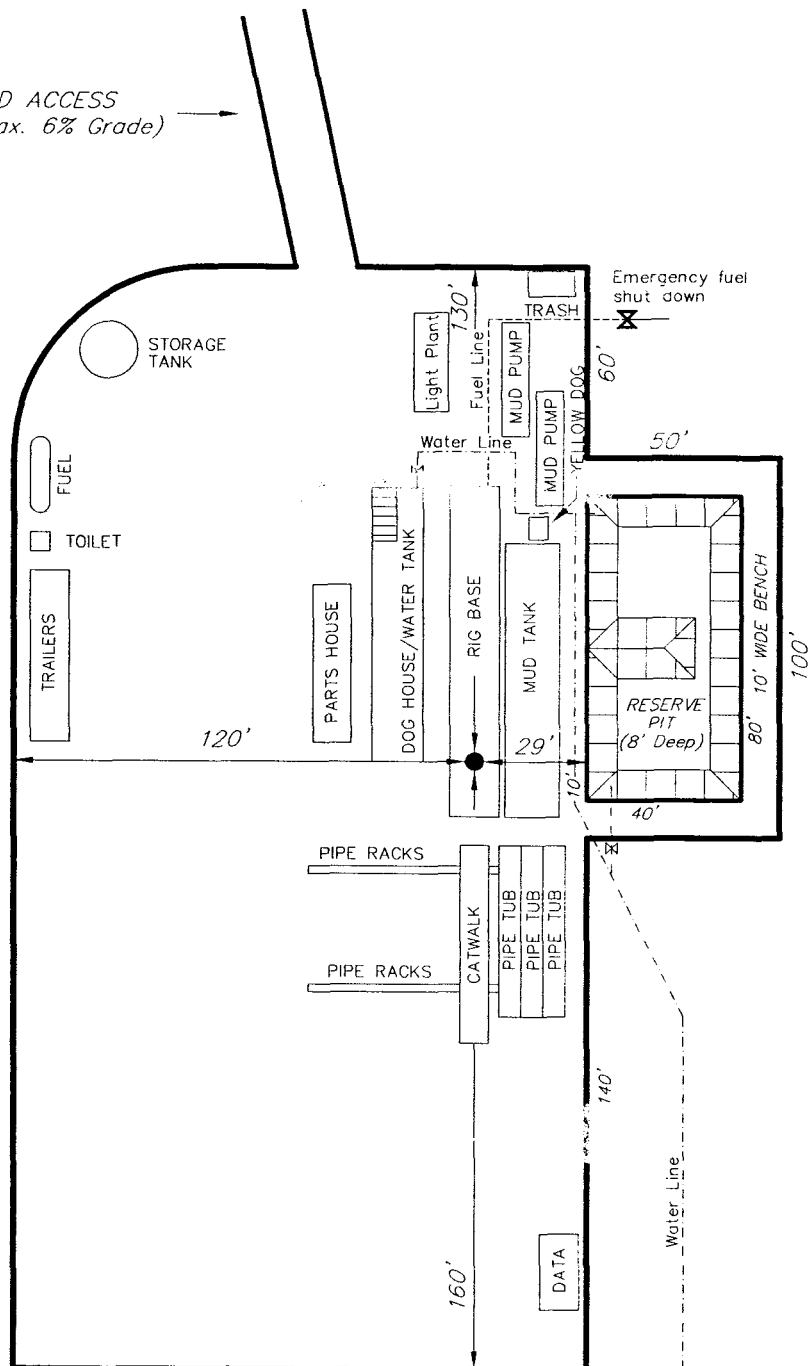
180 NORTH VERNAL AVE. VERNAL, UTAH 84078

# INLAND PRODUCTION COMPANY

## TYPICAL RIG LAYOUT

### BLACKJACK UNIT 13-10

PROPOSED ACCESS  
ROAD (Max. 6% Grade)



SURVEYED BY: D.J.S.

SCALE: 1" = 50'

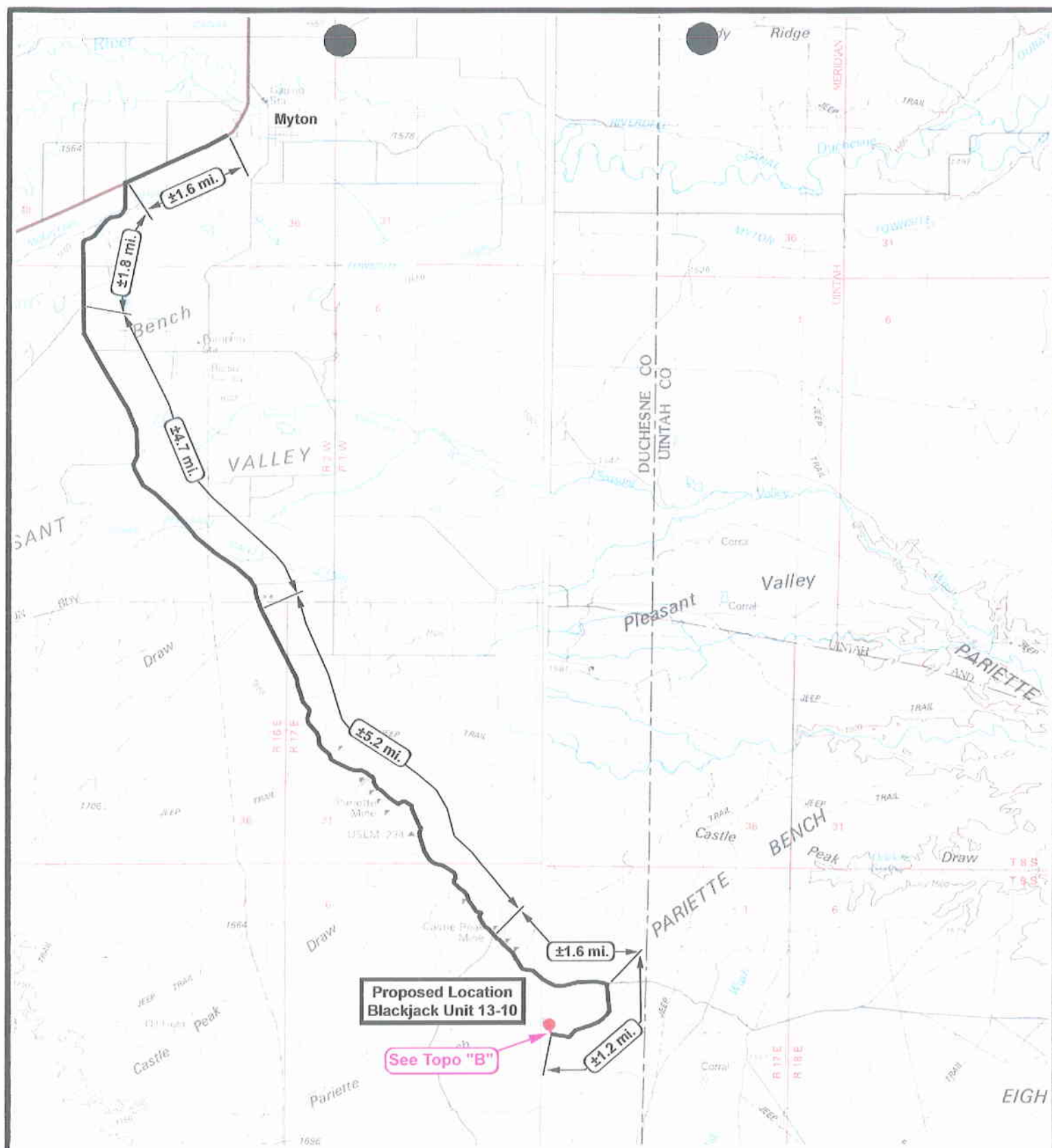
DRAWN BY: R.V.C.

DATE: 3-19-03

Tri State  
Land Surveying, Inc.

(435) 781-2501

180 NORTH VERNAL AVE. VERNAL, UTAH 84078



**Blackjack Unit 13-10**  
**SEC. 10, T9S, R17E, S.L.B.&M.**



**Tri-State**  
**Land Surveying Inc.**  
 (435) 781-2501  
 180 North Vernal Ave. Vernal, Utah 84078

SCALE: 1 = 100,000  
 DRAWN BY: R.A.B.  
 DATE: 08-27-2003

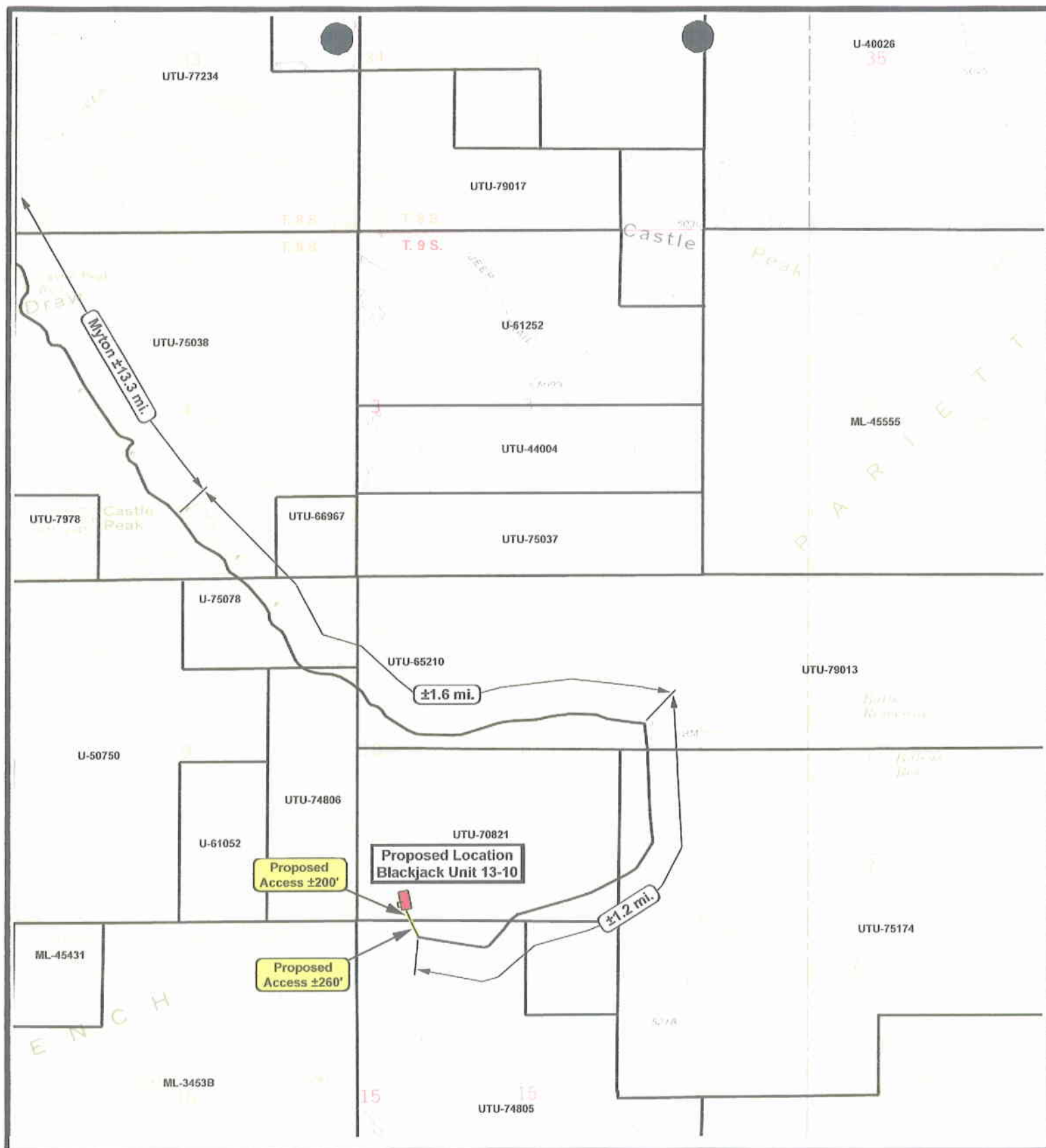
**Legend**

Existing Road

Proposed Access

TOPOGRAPHIC MAP

**"A"**



**Blackjack Unit 13-10**  
**SEC. 10, T9S, R17E, S.L.B.&M.**



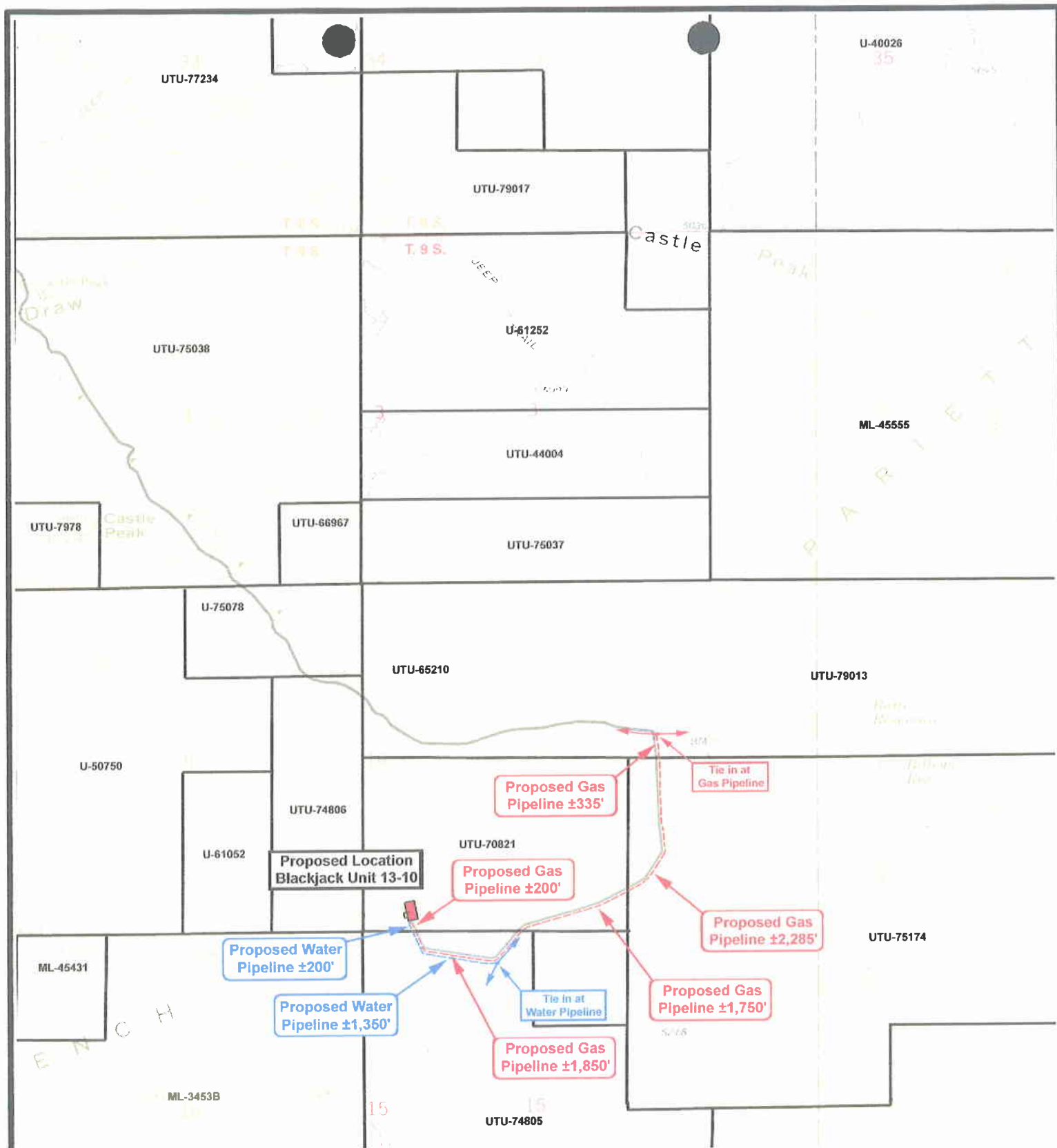
**Tri-State**  
*Land Surveying Inc.*  
 (435) 781-2501  
 180 North Vernal Ave. Vernal, Utah 84078

SCALE: 1" = 2,000'  
 DRAWN BY: R.A.B.  
 DATE: 08-27-2003

**Legend**  
 — Existing Road  
 — Proposed Access

**TOPOGRAPHIC MAP**

**"B"**



**Blackjack Unit 13-10  
SEC. 10, T9S, R17E, S.L.B.&M.**



**Tri-State  
Land Surveying Inc.**  
(435) 781-2501  
180 North Vernal Ave. Vernal, Utah 84078

SCALE: 1" = 2,000'  
DRAWN BY: R.A.B.  
DATE: 08-27-2003

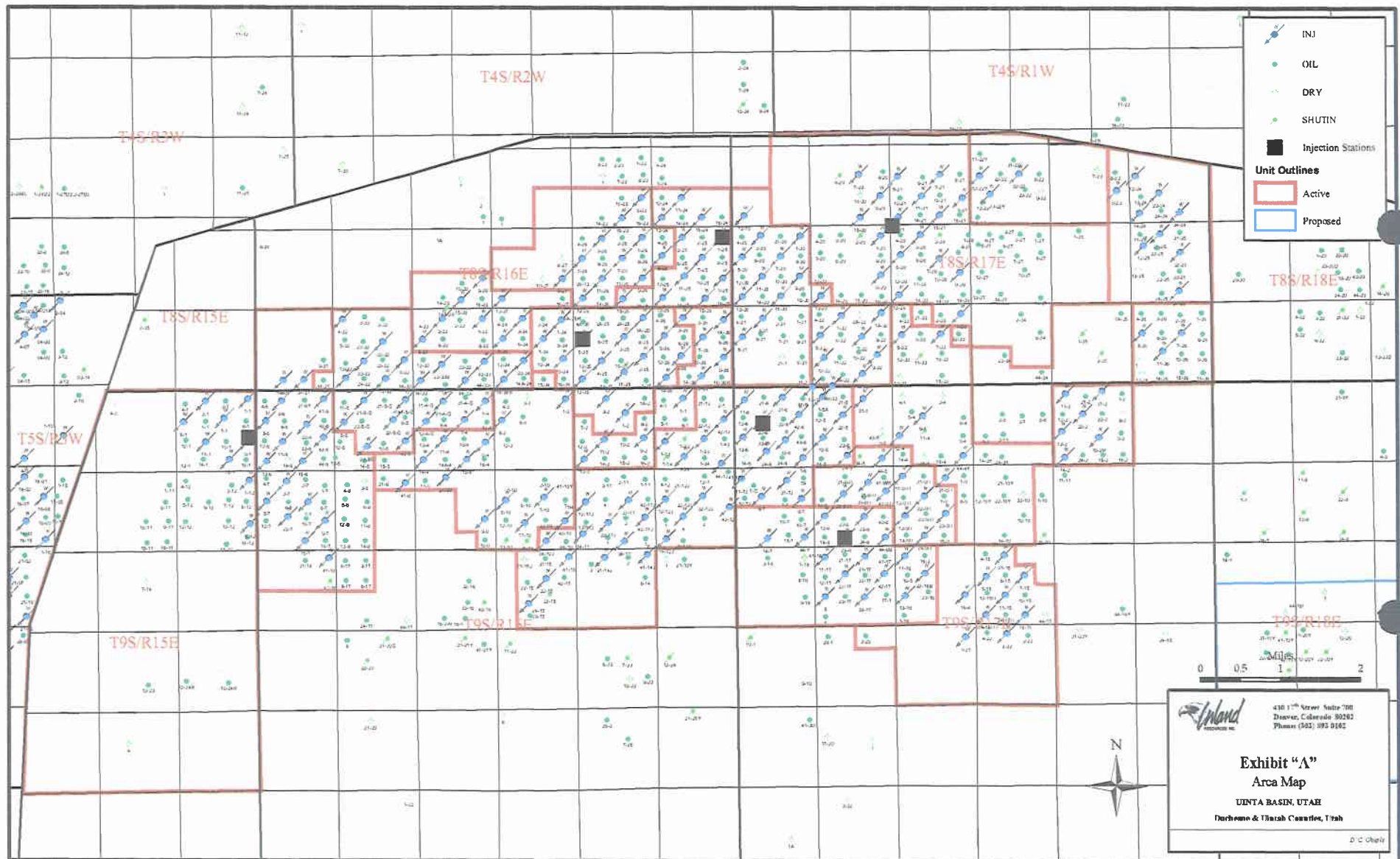
**Legend**

- Roads
- Existing Gas Line
- Proposed Gas Line
- Existing Water Line
- Proposed Water Line

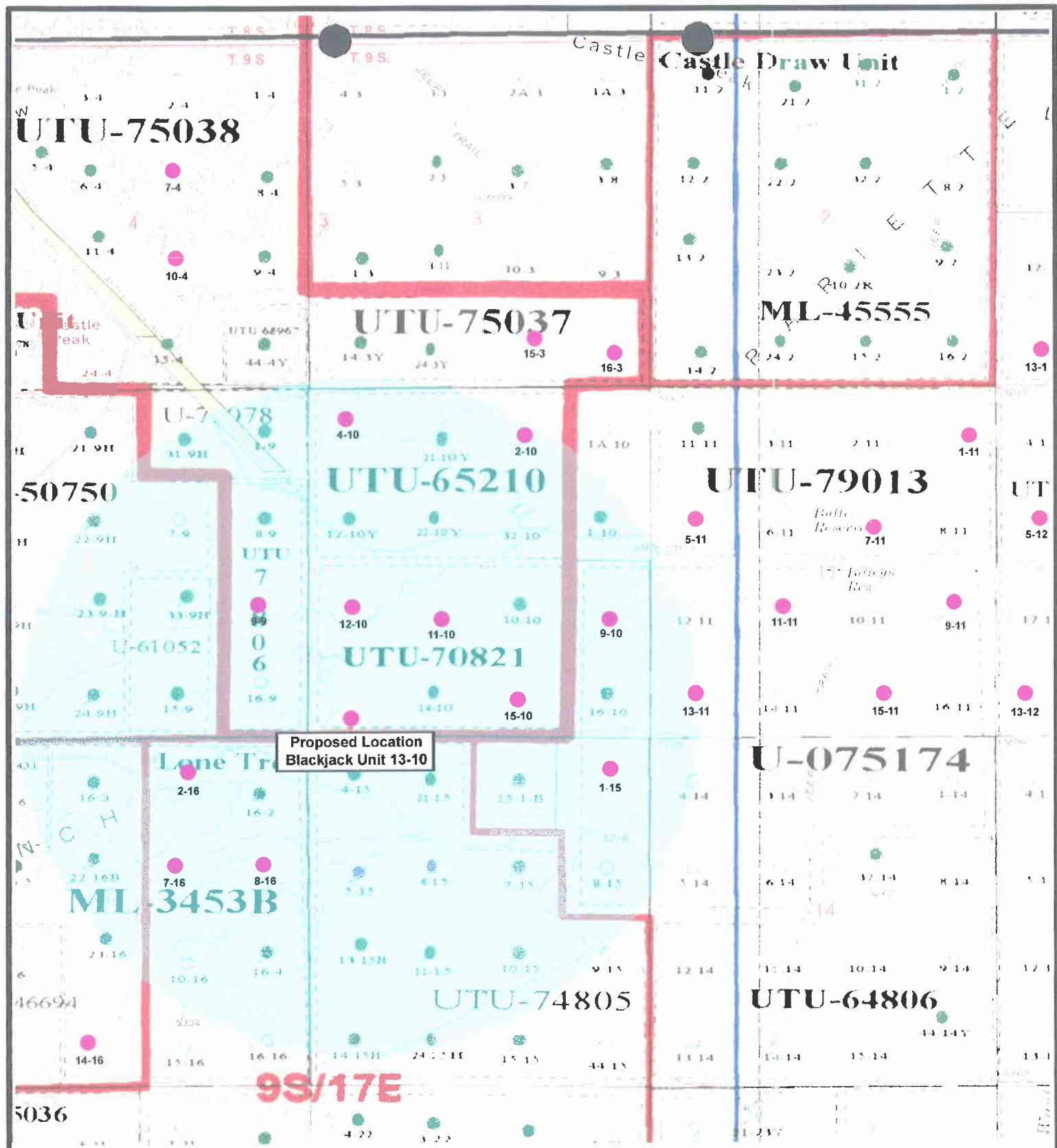
**TOPOGRAPHIC MAP**

**"C"**





January 15, 2003



**Blackjack Unit 13-10  
SEC. 10, T9S, R17E, S.L.B.&M.**



**Tri-State  
Land Surveying Inc.**  
(435) 781-2501  
180 North Vernal Ave. Vernal, Utah 84078

**SCALE: 1" = 2,000'**  
**DRAWN BY: R.A.B.**  
**DATE: 08-27-2002**

**Legend**

- Well Locations
- One-Mile Radius

**Exhibit "B"**



# 2-M SYSTEM

Blowout Prevention Equipment Systems

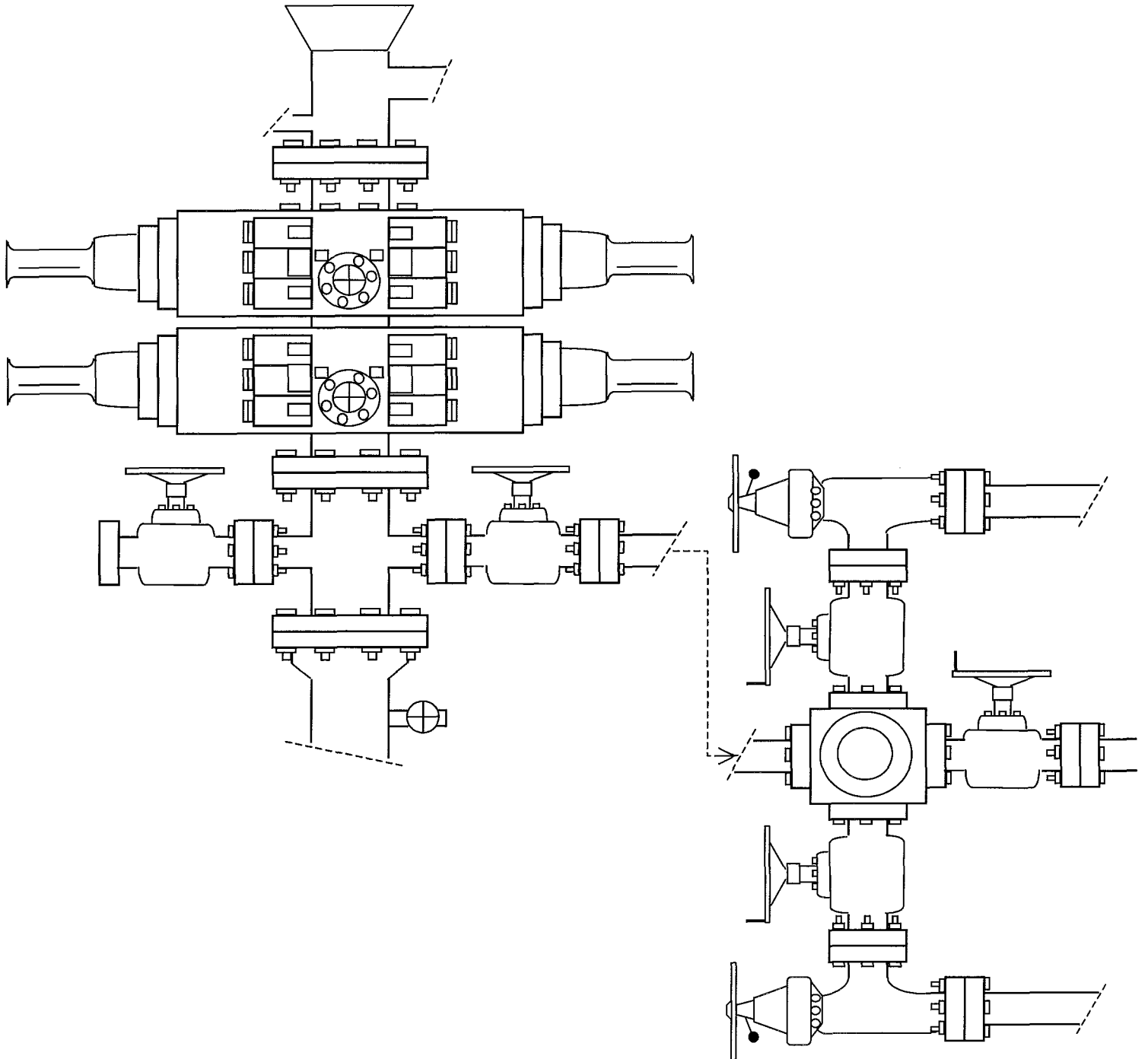


EXHIBIT C

Exhibit "D"  
Page 1 of 2

CULTURAL RESOURCE INVENTORY OF  
INLAND RESOURCES' BLOCK PARCELS IN  
T 9S, R 18E, SECTION 5 and  
T9S, R17E, SECTIONS 9 AND 10  
DUCHESNE AND UINTAH COUNTIES, UTAH

BY:

Angela Whitfield  
and  
Mark C. Bond

Prepared For:

Bureau of Land Management  
Vernal Field Office

Prepared Under Contract With:

Jon D. Holst & Company  
for  
Inland Resources  
2507 Flintridge Place  
Fort Collins, CO 80521

Prepared By:

Montgomery Archaeological Consultants  
P.O. Box 147  
Moab, Utah 84532

MOAC Report No. 03-62

June 20, 2003

United States Department of Interior (FLPMA)  
Permit No. 03-UT-60122

State of Utah Antiquities Project (Survey)  
Permit No. U-03-MQ-0390b

**INLAND RESOURCES, INC.**

**PALEONTOLOGICAL FIELD SURVEY OF PROPOSED  
PRODUCTION DEVELOPMENT AREAS,  
DUCHESNE AND UTAH COUNTIES, UTAH**

(South  $\frac{1}{2}$  Section 6, T 9 S, R 18 E; South  $\frac{1}{2}$  Section 1, T 9 S, R 17 E;  
all of Sections 11 and 12, the NW, SE & NE quarters of the SW  $\frac{1}{4}$  Section 10,  
the NE  $\frac{1}{4}$  & SE  $\frac{1}{4}$  of the SE  $\frac{1}{4}$  Section 9, T 9 S, R 17 E and the SE  $\frac{1}{4}$ , SW  $\frac{1}{4}$ ,  
NE  $\frac{1}{4}$  and SE  $\frac{1}{4}$  of the SE  $\frac{1}{4}$ , Section 33, T 8 S, R 17 E.)

**REPORT OF SURVEY**

Prepared for:

**Inland Resources, Inc.**

Prepared by:

Wade E. Miller  
Consulting Paleontologist  
May 8, 2003

005

WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 10/03/2003

API NO. ASSIGNED: 43-013-32504

WELL NAME: BLACKJACK FED 13-10-9-17

OPERATOR: INLAND PRODUCTION ( N5160 )

CONTACT: MANDIE CROZIER

PHONE NUMBER: 435-646-3721

## PROPOSED LOCATION:

SWSW 10 090S 170E

SURFACE: 0308 FSL 0692 FWL

BOTTOM: 0308 FSL 0692 FWL

DUCHESNE

MONUMENT BUTTE ( 105 )

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-70821

SURFACE OWNER: 1 - Federal

PROPOSED FORMATION: GRRV

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LATITUDE: 40.03910

LONGITUDE: 109.99907

## RECEIVED AND/OR REVIEWED:

☒ Plat  
☒ Bond: Fed[1] Ind[] Sta[] Fee[]  
(No. 4488944 )  
☒ Potash (Y/N)  
☒ Oil Shale 190-5 (B) or 190-3 or 190-13  
☒ Water Permit  
(No. MUNICIPAL )  
☒ RDCC Review (Y/N)  
(Date: )  
☒ Fee Surf Agreement (Y/N)

## LOCATION AND SITING:

R649-2-3.

Unit BLACKJACK (GR)

R649-3-2. General

Siting: 460 From Qtr/Qtr &amp; 920' Between Wells

R649-3-3. Exception

☒ Drilling Unit

Board Cause No: 234-2

Eff Date: 12-22-99

Siting: Suspends General Siting

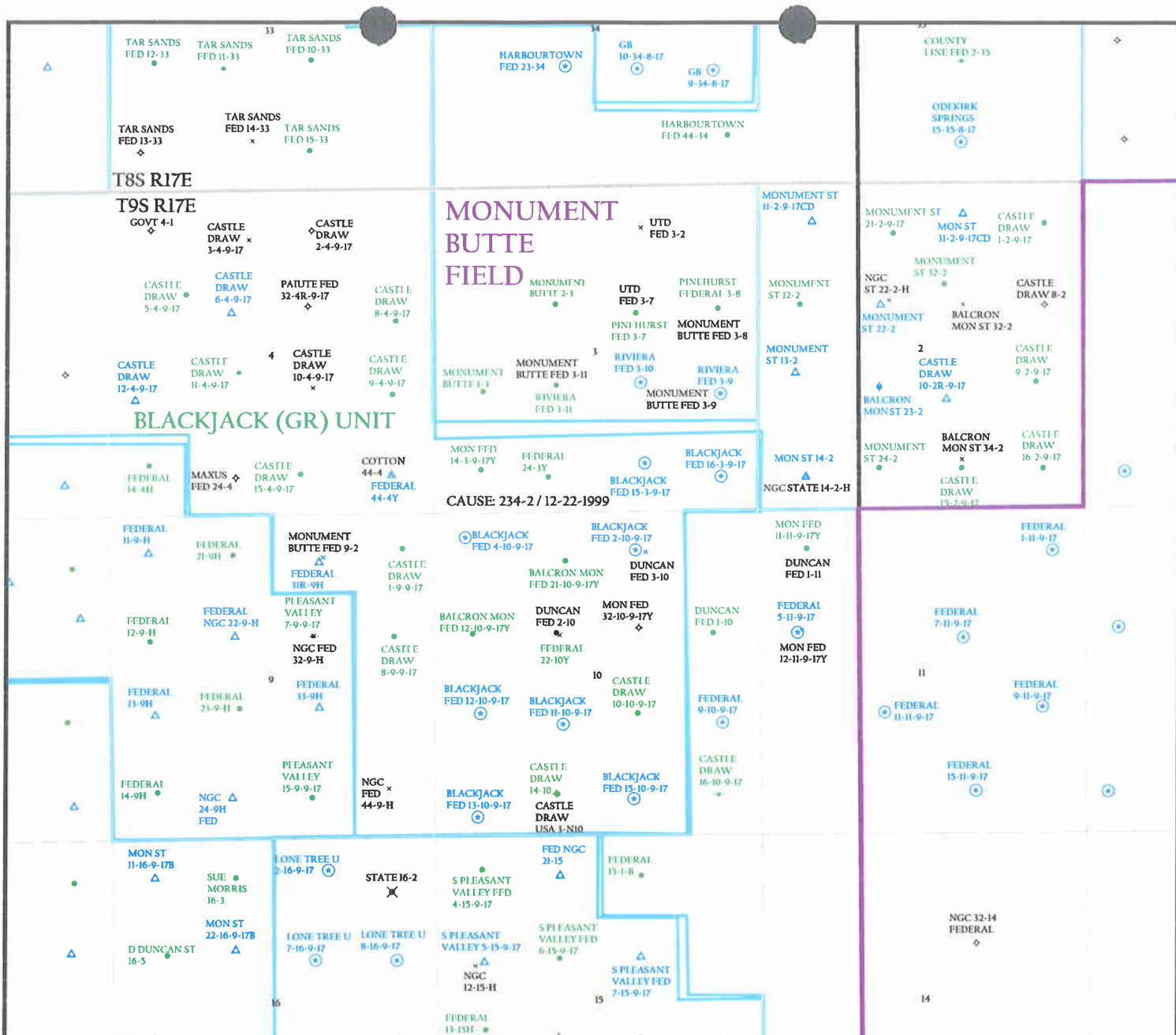
R649-3-11. Directional Drill

COMMENTS:

S&amp;P, Separate file

STIPULATIONS:

1- Federal Approval



OPERATOR: INLAND PRODUCTION CO (N5160)

SEC. 10 T.9S, R.17E

FIELD: MONUMENT BUTTES (105)

COUNTY: DUCHESNE

CAUSE: 234-2 / 12-22-1999

#### Wells

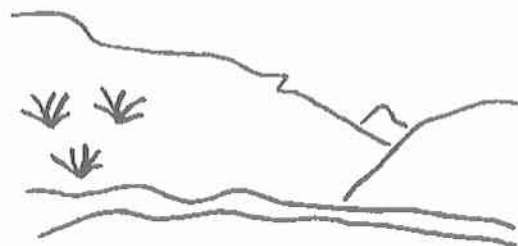
- GAS INJECTION
- GAS STORAGE
- LOCATION ABANDONED
- NEW LOCATION
- PLUGGED & ABANDONED
- PRODUCING GAS
- PRODUCING OIL
- SHUT-IN GAS
- SHUT-IN OIL
- TEMP. ABANDONED
- TEST WELL
- WATER INJECTION
- WATER SUPPLY
- WATER DISPOSAL

#### Unit Status

- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PENDING
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

#### Field Status

- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED



Utah Oil Gas and Mining



PREPARED BY: DIANA MASON  
DATE: 10-OCTOBER-2003



October 7, 2003

Ms. Diana Mason  
Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, Utah 84114

RE: Application for Location Exception  
Blackjack Federal #13-10-9-17  
T9S, R17E, S14M  
Section 10: SW/4SW/4 308' FSL and 692' FWL  
Duchesne County, Utah

Dear Ms. Mason:

Inland Production Company hereby requests administrative approval for a location exception to Rule R649-3-2 governing the location of wells.

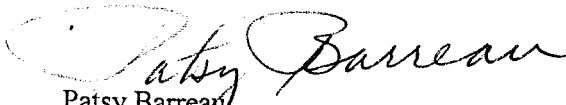
Said Rule states that every well should be in the center of the 40-acre quarter/quarter section with a 200-foot tolerance. The captioned well is proposed to be drilled approximately 153' outside of the prescribed 400 foot window due to the local topography.

Inasmuch as the proposed well remains more than 460' from the lease boundary as shown on the attached plat, only Inland Production Company is affected according to the above rule.

Please contact Mr. Gary Alsobrook if you have any questions.

Sincerely yours,

**INLAND PRODUCTION COMPANY**

  
Patsy Barreau  
Supervisor of Land

CC: Ms. Pat Sutton  
Bureau of Land Management  
170 South 500 East  
Vernal Utah 84078-2799

RECEIVED

OCT 10 2003

DIV. OF OIL, GAS & MINING

Form 3160-3  
(September 2001)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED  
OMB No. 1004-0136  
Expires January 31, 2004

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU-70821
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator Inland Production Company		7. If Unit or CA Agreement, Name and No. BlackJack Unit
3a. Address Route #3 Box 3630, Myton UT 84052		8. Lease Name and Well No. BlackJack Federal 13-10-9-17
3b. Phone No. (include area code) (435) 646-3721		9. API Well No.
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface SW/SW 308' FSL 692' FWL At proposed prod. zone		10. Field and Pool, or Exploratory Monument Butte
11. Sec., T., R., M., or Blk. and Survey or Area SW/SW Sec. 10, T9S R17E		12. County or Parish Duchesne
13. State UT		14. Distance in miles and direction from nearest town or village Approximately 18.1 miles
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if		16. Acres in lease 240.00
17. Spacing Unit dedicated to this well 40 Acres		18. Distance from proposed location to nearest well, drilling, completion applied for, on this lease, ft.
19. BLM/BIA Bond No. on file #4488944		20. Estimated duration Approximately seven (7) days from start to rig release.
21. Elevations (Show whether DF, K 5210' GR		22. Estimated date work will start August 2004

Exception  
Location

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification.
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature <i>Mandie Crozier</i>	Name (Printed/Typed) Mandie Crozier	Date 10/2/03
Title Regulatory Specialist		
Approved by (Signature)	Name (Printed/Typed)	Date
Title	Office	

Application approval does not warrant or certify the the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on reverse)

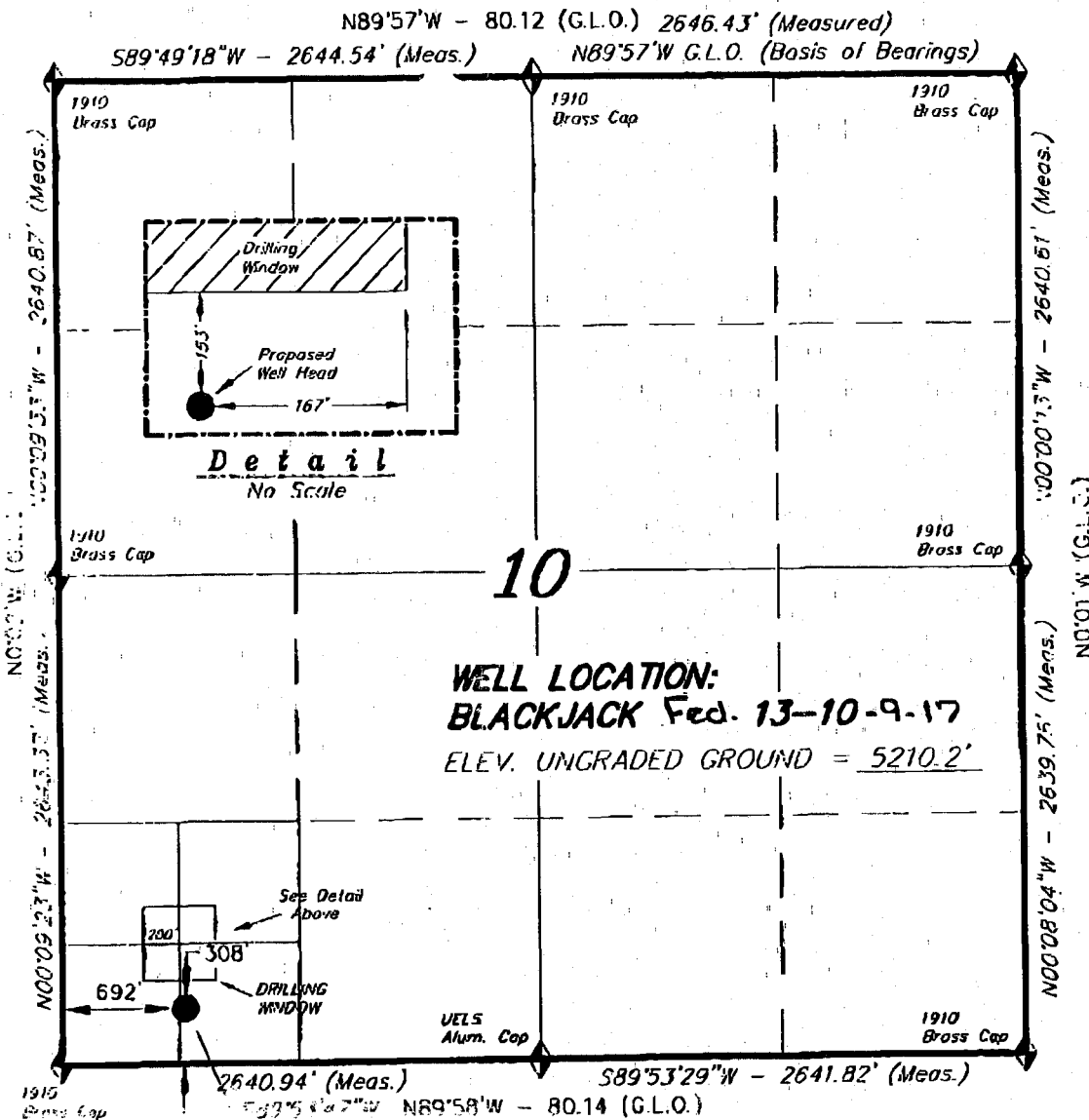
OCT 16 2003

BUREAU OF LAND MANAGEMENT

**T9S, R17E, S.L.B.&M.**

**INLAND PRODUCTION COMPANY**

WELL LOCATION, BLACKJACK Fed. 13-10-9-17  
LOCATED AS SHOWN IN THE SW 1/4 SW  
1/4 OF SECTION 10, T9S, R17E,  
S.L.B.&M. DUCHESNE COUNTY, UTAH.



 = SECTION CORNERS LOCATED

BASIS OF ELEV; U.S.G.S. 7-1/2 min QUAD (PARIETTE DRAW SW)



THIS IS TO CERTIFY THAT THE ABOVE LAND WAS  
PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS  
MADE BY ME OR UNDER MY SUPERVISION AND THAT  
THE SAME ARE TRUE AND CORRECT TO THE BEST OF  
MY KNOWLEDGE AND BELIEF.

STACY W.  
STEWART

REGISTERED LAND SURVEYOR  
REGISTRATION NO. 189577  
STATE OF UTAH

**TRI STATE LAND SURVEYING & CONSULTING**

180 NORTH VERNAL AVE. - VERNAL, UTAH 84078

(435) 781-2501

SCALE: 1" = 1000'

SURVEYED BY: D.J.S.

DATE: 8-19-03

DRAWN BY: R.V.C.

NOTES:

FILE #





State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

1594 West North Temple, Suite 1210

PO Box 145801

Salt Lake City, Utah 84114-5801

(801) 538-5340 telephone

(801) 359-3940 fax

(801) 538-7223 TTY

www.nr.utah.gov

Michael O. Leavitt  
Governor

Robert L. Morgan  
Executive Director

Lowell P. Braxton  
Division Director

October 14, 2003

Inland Production Company  
Rt. #3, Box 3630  
Myton, UT 84052

Re: Blackjack Federal 13-10-9-17 Well, 308' FSL, 692' FWL, SW SW, Sec. 10, T. 9 South,  
R. 17 East, Duchesne County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-013-32504.

Sincerely,

(for) John R. Baza  
Associate Director

pab  
Enclosures

cc: Duchesne County Assessor  
Bureau of Land Management, Vernal District Office

Operator: Inland Production Company  
Well Name & Number Blackjack Federal 13-10-9-17  
API Number: 43-013-32504  
Lease: UTU-70821

Location: SW SW Sec. 10 T. 9 South R. 17 East

### Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dan Jarvis at (801) 538-5338

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

007

Form 3160-3  
(September 2001)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

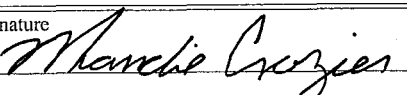
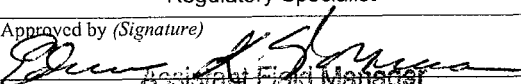
## APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED  
OMB No. 1004-0136  
Expires January 31, 2004

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU-70821
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator Inland Production Company		7. If Unit or CA Agreement, Name and No. BlackJack Unit
3a. Address Route #3 Box 3630, Myton UT 84052		8. Lease Name and Well No. BlackJack Federal 13-10-9-17
3b. Phone No. (include area code) (435) 646-3721		9. API Well No. 43.013.32504
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SW/SW 308' FSL 692' FWL At proposed prod. zone		10. Field and Pool, or Exploratory Monument Butte
14. Distance in miles and direction from nearest town or post office* Approximatley 16.1 miles southeast of Myton, Utah		11. Sec., T., R., M., or Blk. and Survey or Area SW/SW Sec. 10, T9S R17E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) Approx. 308' f/lse, 308' f/unit	16. No. of Acres in lease 240.00	17. Spacing Unit dedicated to this well 40 Acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 1729'	19. Proposed Depth 6500'	20. BLM/BIA Bond No. on file #4488944
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5210' GR	22. Approximate date work will start* 1st Quarter 2004	23. Estimated duration Approximately seven (7) days from spud to rig release.
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- |   |  |
|---|--|
| 1. Well plat certified by a registered surveyor.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification.   |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature 	Name (Printed/Typed) Mandie Crozier	Date 10/2/03
Title Regulatory Specialist		
Approved by (Signature) 	Name (Printed/Typed) EDWIN J. FORSMAN	Date 4/7/04
Title Assistant Field Manager Mineral Resources	Office	

Application approval does not warrant or certify the the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make any statement or representation to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on reverse)

NOTICE OF APPROVAL  
RECEIVED

APR 15 2004

DIV. OF OIL, GAS &amp; MINING

CONDITIONS OF APPROVAL ATTACHED

CONDITIONS OF APPROVAL  
APPLICATION FOR PERMIT TO DRILL

Company/Operator: Inland Production Company  
Well Name & Number: BLACKJACK FEDERAL 13-10-9-17  
API Number: 43-013-32504  
Lease Number: UTU – 70821  
Location: SWSW Sec. 10 TWN: 09S RNG: 17E  
Agreement: BlackJack Unit

For more specific details on notification requirements, please check the Conditions of Approval for Notice to Drill and Surface Use Program.

CONDITIONS OF APPROVAL FOR NOTICE TO DRILL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

**Submit an electronic copy of all logs run on this well in LAS format. This submission will replace the requirement for submittal of paper logs to the BLM.**

Be aware fire restrictions may be in effect when location is being constructed and/or when well is being drilled. Contact the appropriate Surface Management Agency for information.

A. DRILLING PROGRAM

1. Casing Program and Auxiliary Equipment

As a minimum, the usable water and oil shale resources shall be isolated and/or protected by having a cement top for the production casing at least 200 ft. above the top of the Green River Formation, identified at  $\pm 2,097$  ft.

CONDITIONS OF APPROVAL  
FOR THE SURFACE USE PROGRAM OF THE  
APPLICATION FOR PERMIT TO DRILL

- No construction or drilling shall be allowed during the burrowing owl nesting season (April 1 to Aug. 15), without first consulting the BLM biologist. If no nesting owls are found, drilling will be allowed.
- To reduce noise levels in the area, a hospital muffler or multi-cylinder engine shall be installed on the pumping unit.
- A BLM approved paleontologist shall monitor all areas of bedrock exposure during the construction of the access road and well pad.
- The reserve pit shall be bedded with felt prior to the installation of a one piece nylon reinforced liner of at least 12 mils of thickness.

**DIVISION OF OIL, GAS AND MINING*****SPUDDING INFORMATION***Name of Company: INLAND PRODUCTION COMPANYWell Name: BLACKJACK FED 13-10-9-17Api No: 43-013-32504 Lease Type: FEDERALSection 10 Township 09S Range 17E County DUCHESNEDrilling Contractor EAGLE RIG # 1**SPUDDED:**Date 07/29/04Time 10:00 AMHow DRY***Drilling will commence:*** \_\_\_\_\_Reported by RAY HERRERATelephone # 1-435-823-1990Date 07/30/2004 Signed CHD

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

009

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry a different reservoir.  
Use "APPLICATION FOR PERMIT -" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

INLAND PRODUCTION COMPANY

3. Address and Telephone No.

Rt. 3 Box 3630, Myton Utah, 84052 435-646-3721

4. Location of Well (Footage, Sec., T., R., m., or Survey Description)

308 FSL 692 FWL SW/SW Section 10, T9S R17E

5. Lease Designation and Serial No.

UTU-70821

6. If Indian, Allottee or Tribe Name

NA

7. If Unit or CA, Agreement Designation

BLACKJACK

8. Well Name and No.

BLACKJACK FEDERAL 13-10-9-17

9. API Well No.

43-013-32504

10. Field and Pool, or Exploratory Area

MONUMENT BUTTE

11. County or Parish, State

DUCHESNE COUNTY, UT

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☐ Notice of Intent  
☒ Subsequent Report  
☐ Final Abandonment Notice

TYPE OF ACTION

☐ Abandonment  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☒ Other Spud Notice

☐ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut-Off  
☐ Conversion to Injection  
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

On 7-29-04 MIRU Eagle spud rig #1. Spud well @ 10:00 am Drill 310' of 12 1/4" hole with air mist. TIH W/ 7 Jt's 8 5/8" J-55 24 # csgn. Set @ 309.90' KB On 7-31-04 cement with 150 sks of class "G" w/ 3% CaCL2 + 1/4# sk Cello- Flake Mixed @ 15.8 ppg > 1.17 cf/ sk yeild. Returned 3 bbls cement to pit. WOC.

RECEIVED

AUG 03 2004

DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct

Signed

Ray Herrera

Title

Drilling Foreman

Date

8/1/2004

CC: UTAH DOGM

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

CC: Utah DOGM

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

# INLAND PRODUCTION COMPANY - CASING & CEMENT REPORT

8 5/8 CASING SET AT 300.9

LAST CASING 8 5/8" SET AT 300.90  
 DATUM 12' KB  
 DATUM TO CUT OFF CASING \_\_\_\_\_  
 DATUM TO BRADENHEAD FLANGE \_\_\_\_\_  
 TD DRILLER 310' LOGGER \_\_\_\_\_  
 HOLE SIZE 12 1/4

OPERATOR Inland Production Company  
 WELL Black Jack 13-10-9-17  
 FIELD/PROSPECT Monument Butte  
 CONTRACTOR & RIG # Eagle spud rig #1

LOG OF CASING STRING:							
PIECES	OD	ITEM - MAKE - DESCRIPTION	WT / FT	GRD	THREAD	CONDT	LENGTH
		40.50' shoe jt					
		WHI - 92 csg head			8rd	A	0.95
7	8 5/8"	Maverick ST&C csg	24#	J-55	8rd	A	289.05
		<b>GUIDE</b> shoe			8rd	A	0.9
CASING INVENTORY BAL.		FEET	JTS	TOTAL LENGTH OF STRING			290.9
TOTAL LENGTH OF STRING		290.9	7	LESS CUT OFF PIECE			2
LESS NON CSG. ITEMS		1.85		PLUS DATUM TO T/CUT OFF CSG			12
PLUS FULL JTS. LEFT OUT		0		CASING SET DEPTH			<b>300.9</b>
TOTAL		301.33	7	} COMPARE			
TOTAL CSG. DEL. (W/O THRDS)		301.33	7				
TIMING		1ST STAGE					
BEGIN RUN CSG.		SPUD	7/29/2004	GOOD CIRC THRU JOB <u>YES</u>			
CSG. IN HOLE				Bbls CMT CIRC TO SURFACE <u>3 bbls</u>			
BEGIN CIRC		11:00 AM	7/31/2004	RECIPROCATED PIPE FOR _____ THRU _____ FT STROKE			
BEGIN PUMP CMT		11:18 AM	7/31/2004	DID BACK PRES. VALVE HOLD ? <u>N/A</u>			
BEGIN DSPL. CMT		11:30 AM	7/31/2004	BUMPED PLUG TO _____ 782 _____ PSI			
PLUG DOWN		<b>Cemented</b>	<b>7/31/2004</b>	11:33 AM			
CEMENT USED		CEMENT COMPANY- <b>BJ</b>					
STAGE	# SX	CEMENT TYPE & ADDITIVES					
1	150	Class "G" w/ 2% CaCL2 + 1/4#/sk Cello-Flake mixed @ 15.8 ppg 1.17 cf/sk yield					
CENTRALIZER & SCRATCHER PLACEMENT		SHOW MAKE & SPACING					
Centralizers - Middle first, top second & third for 3							

COMPANY REPRESENTATIVE Ray Herrera DATE 7/31/2004

RECEIVED

AUG 03 2004

DIV. OF OIL, GAS & MINING



STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING  
ENTITY ACTION FORM - FORM 6

OPERATOR: INLAND PRODUCTION COMPANY  
ADDRESS: RT. 3 BOX 3630  
MYTON, UT 84052

OPERATOR ACCT. NO. N5160

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
A	99999	14248	43-013-32393	Ashley Federal 4-13-9-15	NW/NW	13	9S	15E	Duchesne	July 22, 2004	8/5/04
WELL 1 COMMENTS: non PA - GRUV											
B	99999	12704	43-013-32503	BlackJack Federal 15-10-9-17	SW/SE	10	9S	17E	Duchesne	July 27, 2004	8/5/04
WELL 2 COMMENTS: GRUV											
B	99999	12704	43-013-32504	BlackJack Federal 13-10-9-17	SW/SW	10	9S	17E	Duchesne	July 29, 2004	8/5/04
WELL 3 COMMENTS: GRUV											
A	99999	14249	43-047-35157	Federal 7-11-9-17	SW/NE	11	9S	17E	Uintah	August 2, 2004	8/5/04
WELL 4 COMMENTS: GRUV											
A	99999	14250	43-047-35158	Federal 9-11-9-17	NE/SE	11	9S	17E	Uintah	August 3, 2004	8/5/04
WELL 5 COMMENTS: GRUV											

ACTION CODES (See instructions on back of form)

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

(3000)

RECEIVED

AUG 05 2004

DIV. OF OIL, GAS & MINING

Signature

Production Clerk

Title

Kebbie S. Jones

August 5, 2004

Date

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

011

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry a different reservoir.  
Use "APPLICATION FOR PERMIT -" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

INLAND PRODUCTION COMPANY

3. Address and Telephone No.

Rt. 3 Box 3630, Myton Utah, 84052 435-646-3721

4. Location of Well (Footage, Sec., T., R., m., or Survey Description)

308 FSL 692 FWL SW/SW Section 10, T9S R17E

5. Lease Designation and Serial No.

UTU-70821

6. If Indian, Allottee or Tribe Name

NA

7. If Unit or CA, Agreement Designation

BLACKJACK

8. Well Name and No.

BLACKJACK FEDERAL 13-10-9-17

9. API Well No.

43-013-32402 32504

10. Field and Pool, or Exploratory Area

MONUMENT BUTTE

11. County or Parish, State

DUCHESNE COUNTY, UT

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☐ Notice of Intent  
☒ Subsequent Report  
☐ Final Abandonment Notice

TYPE OF ACTION

☐ Abandonment  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☒ Other Weekly Status Report  
☐ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut-Off  
☐ Conversion to Injection  
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

On 08/10/04. MIRU Patterson Rig #155. Set equipment. Pressure test Bop's, Kelly, & TIW to 2,000 psi. Test 85/8" csgn to 1,500 psi. Vernal BLM office was notified of test. PU BHA and tag cement @ 253'. Drill out cement & shoe. Continue to drill a 77/8" hole with fresh water to a depth of 5725'. Lay down drill string, BHA. Open hole log from TD to surface. PU & MU guide shoe, 1 jt 51/2" J-55 15.5 # csgn. Float collar, & 134 Jt's 51/2" J-55 15.5# csgn. Set @ 5713.99' KB. Cement with 350 sks Prem Lite II w/ 3% KCL, 10% Gel, 3#"s sk CSE, 2#"s sk Kolseal, 5% Sms, 1/2# sks Celloflake. Mixed @ 11.0 ppg, >3.43 yld. Followed by 450 sks 50/50 Poz w/ 3% KCL, 2% Gel, .05% Static free, 1/4# sk Celloflake .3%SM. Mixed @ 14.4 ppg, > 1.24 yld. Good returns with 20 bbls cement return to pit. Nipple down BOP's. Drop slips @ 85,000 #'s tension. Clean pit's & release rig @ 1:00 am on 08-16-04.

14. I hereby certify that the foregoing is true and correct

Signed

Floyd Mitchell  
Floyd Mitchell

Title

Drilling Foreman

Date

August 16, 2004

CC: UTAH DOGM

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

CC: Utah DOGM

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

RECEIVED

AUG 19 2004

DIV. OF OIL, GAS & MINING

# INLAND PRODUCTION COMPANY - CASING & CEMENT REPORT

5 1/2" CASING SET AT 5713.99

Ft cdlr @ 5670'

LAST CASING 8 5/8" SET AT 300'

OPERATOR Inland Production Company

DATUM 12' KB

WELL Black Jack 13-10-9-17

DATUM TO CUT OFF CASING 12

FIELD/PROSPECT Monument Butte

DATUM TO BRADENHEAD FLANGE

CONTRACTOR & RIG # Patterson 155

TD DRILLER 5725' Loggers TD 5712'

HOLE SIZE 7 7/8"

## LOG OF CASING STRING:

PIECES	OD	ITEM - MAKE - DESCRIPTION	WT / FT	GRD	THREAD	CONDT	LENGTH
		Landing Jt					14
		<b>6.94' @ 3881'</b>					
<b>134</b>	<b>5 1/2"</b>	IPS LT & C casing	<b>15.5#</b>	<b>J-55</b>	<b>8rd</b>	<b>A</b>	5658.09
		Float collar					0.6
<b>1</b>	<b>5 1/2"</b>	Maverick LT&C csg	<b>15.5#</b>	<b>J-55</b>	<b>8rd</b>	<b>A</b>	42.65
		<b>GUIDE</b> shoe			<b>8rd</b>	<b>A</b>	0.65

CASING INVENTORY BAL.	FEET	JTS	TOTAL LENGTH OF STRING	5715.99
TOTAL LENGTH OF STRING	5715.99	135	LESS CUT OFF PIECE	14
LESS NON CSG. ITEMS	15.25		PLUS DATUM TO T/CUT OFF CSG	12
PLUS FULL JTS. LEFT OUT	126.7	3	CASING SET DEPTH	<b>5713.99</b>

TOTAL	<b>5827.44</b>	138	} COMPARE
TOTAL CSG. DEL. (W/O THRDS)	5827.44	138	
TIMING	1ST STAGE	2nd STAGE	
BEGIN RUN CSG.	8/15/2004	3:00 PM	GOOD CIRC THRU JOB <u>Yes</u>
CSG. IN HOLE	8/15/2004	6:00 PM	Bbls CMT CIRC TO SURFACE <u>20 BBLs</u>
BEGIN CIRC	8/15/2004	6:00 PM	RECIPROCATED PIPE IN/A <u>THRUSTROKE</u>
BEGIN PUMP CMT	8/15/2004	7:19 PM	DID BACK PRES. VALVE HOLD ? <u>YES</u>
BEGIN DSPL. CMT	8/15/2004	8:12 PM	BUMPED PLUG TO <u>2041</u> PSI
PLUG DOWN	8/15/2004	8:33 PM	

CEMENT USED		CEMENT COMPANY- <b>B. J.</b>
STAGE	# SX	CEMENT TYPE & ADDITIVES
<b>1</b>	<b>350</b>	Prem-lite II w/ 10% gel + 3 % KCL, 3#s /sk CSE + 2# sk/kolseal + 1/4#s/sk Cello Flake
		mixed @ 11.0 ppg W / 3.43 cf/sk yield
<b>2</b>	<b>450</b>	50/50 poz W/ 2% Gel + 3% KCL, .5%EC1,1/4# sk C.F. 2% gel. 3% SM mixed @ 14.4 ppg W/ 1.24 YLD
CENTRALIZER & SCRATCHER PLACEMENT		SHOW MAKE & SPACING
Centralizers - Middle first, top second & third. Then every third collar for a total of 20.		

COMPANY REPRESENTATIVE Floyd Mitchell

DATE 8/16/04



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, UT 84145-0155  
<http://www.blm.gov>



IN REPLY REFER TO:  
3106  
(UT-924)

September 16, 2004

### Memorandum

To: Vernal Field Office

From: Acting Chief, Branch of Fluid Minerals

Subject: Merger Approval

Attached is an approved copy of the name change recognized by the Utah State Office. We have updated our records to reflect the merger from Inland Production Company into Newfield Production Company on September 2, 2004.

Michael Coulthard  
Acting Chief, Branch of  
Fluid Minerals

### Enclosure

1. State of Texas Certificate of Registration

cc: MMS, Reference Data Branch, James Sykes, PO Box 25165, Denver CO 80225  
State of Utah, DOGM, Attn: Earlene Russell, PO Box 145801, SLC UT 84114  
Teresa Thompson  
Joe Incardine  
Connie Seare



## Office of the Secretary of State

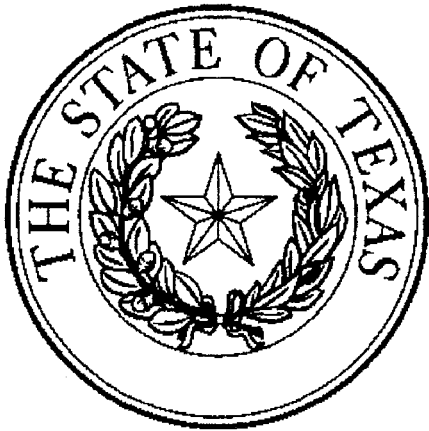
The undersigned, as Secretary of State of Texas, does hereby certify that the attached is a true and correct copy of each document on file in this office as described below:

Newfield Production Company  
Filing Number: 41530400

Articles of Amendment

September 02, 2004

In testimony whereof, I have hereunto signed my name officially and caused to be impressed hereon the Seal of State at my office in Austin, Texas on September 10, 2004.



A handwritten signature in black ink, appearing to read "G. Connor".

Secretary of State

ARTICLES OF AMENDMENT  
TO THE  
ARTICLES OF INCORPORATION  
OF  
INLAND PRODUCTION COMPANY

FILED  
In the Office of the  
Secretary of State of Texas  
SEP 02 2004  
Corporations Section

Pursuant to the provisions of Article 4.04 of the Texas Business Corporation Act (the "TBCA"), the undersigned corporation adopts the following articles of amendment to the articles of incorporation:

ARTICLE 1 -- Name

The name of the corporation is Inland Production Company.

ARTICLE 2 -- Amended Name

The following amendment to the Articles of Incorporation was approved by the Board of Directors and adopted by the shareholders of the corporation on August 27, 2004.

The amendment alters or changes Article One of the Articles of Incorporation to change the name of the corporation so that, as amended, Article One shall read in its entirety as follows:

"ARTICLE ONE -- The name of the corporation is Newfield Production Company."

ARTICLE 3 -- Effective Date of Filing

This document will become effective upon filing.

The holder of all of the shares outstanding and entitled to vote on said amendment has signed a consent in writing pursuant to Article 9.10 of the TBCA, adopting said amendment, and any written notice required has been given.

IN WITNESS WHEREOF, the undersigned corporation has executed these Articles of Amendment as of the 1<sup>st</sup> day of September, 2004.

INLAND RESOURCES INC.

By: Susan G. Riggs  
Susan G. Riggs, Treasurer

UTSL-	15855	61052	73088	76561	
071572A	16535	62848	73089	76787	
065914	16539	63073B	73520A	76808	
	16544	63073D	74108	76813	
	17036	63073E	74805	76954	63073X
	17424	63073O	74806	76956	63098A
	18048	64917	74807	77233	68528A
UTU-	18399	64379	74808	77234	72086A
	19267	64380	74389	77235	72613A
02458	26026A	64381	74390	77337	73520X
03563	30096	64805	74391	77338	74477X
03563A	30103	64806	74392	77339	75023X
04493	31260	64917	74393	77357	76189X
05843	33992	65207	74398	77359	76331X
07978	34173	65210	74399	77365	76788X
09803	34346	65635	74400	77369	77098X
017439B	36442	65967	74404	77370	77107X
017985	36846	65969	74405	77546	77236X
017991	38411	65970	74406	77553	77376X
017992	38428	66184	74411	77554	78560X
018073	38429	66185	74805	78022	79485X
019222	38431	66191	74806	79013	79641X
020252	39713	67168	74826	79014	80207X
020252A	39714	67170	74827	79015	81307X
020254	40026	67208	74835	79016	
020255	40652	67549	74868	79017	
020309D	40894	67586	74869	79831	
022684A	41377	67845	74870	79832	
027345	44210	68105	74872	79833	
034217A	44426	68548	74970	79831	
035521	44430	68618	75036	79834	
035521A	45431	69060	75037	80450	
038797	47171	69061	75038	80915	
058149	49092	69744	75039	81000	
063597A	49430	70821	75075		
075174	49950	72103	75078		
096547	50376	72104	75089		
096550	50385	72105	75090		
	50376	72106	75234		
	50750	72107	75238		
10760	51081	72108	76239		
11385	52013	73086	76240		
13905	52018	73087	76241		
15392	58546	73807	76560		

## OPERATOR CHANGE WORKSHEET

## ROUTING

1. GLH

2. CDW

3. FILE

013

Change of Operator (Well Sold)

Designation of Agent/Operator

X Operator Name Change

Merger

The operator of the well(s) listed below has changed, effective:

9/1/2004

<b>FROM: (Old Operator):</b> N5160-Inland Production Company Route 3 Box 3630 Myton, UT 84052 Phone: 1-(435) 646-3721				<b>TO: ( New Operator):</b> N2695-Newfield Production Company Route 3 Box 3630 Myton, UT 84052 Phone: 1-(435) 646-3721					
<b>CA No.</b>			<b>Unit:</b>		<b>BLACKJACK (GR)</b>				
<b>WELL(S)</b>									
NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS	
BLACKJACK FED 9-33-8-17	33	080S	170E	4301332515	12704	Federal	OW	P	K
BLACKJACK FED 16-3-9-17	03	090S	170E	4301332500	12704	Federal	OW	P	K
BLACKJACK FED 15-3-9-17	03	090S	170E	4301332501	12704	Federal	OW	P	K
CASTLE DRAW 5-4-9-17	04	090S	170E	4301332074	12704	Federal	OW	P	
CASTLE DRAW 6-4-9-17	04	090S	170E	4301332075	12704	Federal	WI	A	
CASTLE DRAW 8-4-9-17	04	090S	170E	4301332077	12704	Federal	OW	S	
CASTLE DRAW 9-4-9-17	04	090S	170E	4301332079	12704	Federal	OW	P	
CASTLE DRAW 11-4-9-17	04	090S	170E	4301332081	12704	Federal	OW	S	
CASTLE DRAW 12-4-9-17	04	090S	170E	4301332082	12704	Federal	WI	A	
CASTLE DRAW 15-4-9-17	04	090S	170E	4301332083	12704	Federal	OW	P	
BLACKJACK FED 10-4-9-17	04	090S	170E	4301332509	12704	Federal	OW	P	K
CASTLE DRAW 1-9-9-17	09	090S	170E	4301332071	12704	Federal	OW	P	
CASTLE DRAW 8-9-9-17	09	090S	170E	4301332078	12704	Federal	WI	A	
BLACKJACK FED 16-9-9-17	09	090S	170E	4301332516	12704	Federal	OW	P	K
BLACKJACK FED 15-10-9-17	10	090S	170E	4301332503	12704	Federal	OW	OPS	K
BLACKJACK FED 13-10-9-17	10	090S	170E	4301332504	12704	Federal	OW	P	K
BLACKJACK FED 12-10-9-17	10	090S	170E	4301332505	12704	Federal	OW	P	K
BLACKJACK FED 11-10-9-17	10	090S	170E	4301332506	12704	Federal	OW	P	K
BLACKJACK FED 4-10-9-17	10	090S	170E	4301332507	12704	Federal	OW	P	K
BLACKJACK FED 2-10-9-17	10	090S	170E	4301332508	12704	Federal	OW	P	K

## OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 9/15/20042. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 9/15/20043. The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 2/23/2005

4. Is the new operator registered in the State of Utah: YES Business Number: 755627-0143

5. If NO, the operator was contacted on:



6a. (R649-9-2)Waste Management Plan has been received on: IN PLACE  
6b. Inspections of LA PA state/fee well sites complete on: waived

7. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM BIA

8. **Federal and Indian Units:**  
The BLM or BIA has approved the successor of unit operator for wells listed on: n/a

9. **Federal and Indian Communization Agreements ("CA"):**  
The BLM or BIA has approved the operator for all wells listed within a CA on: na/

10. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 2/23/2005

#### DATA ENTRY:

1. Changes entered in the **Oil and Gas Database** on: 2/28/2005  
2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 2/28/2005  
3. Bond information entered in RBDMS on: 2/28/2005  
4. Fee/State wells attached to bond in RBDMS on: 2/28/2005  
5. Injection Projects to new operator in RBDMS on: 2/28/2005  
6. Receipt of Acceptance of Drilling Procedures for APD/New on: waived

#### FEDERAL WELL(S) BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: UT 0056

#### INDIAN WELL(S) BOND VERIFICATION:

1. Indian well(s) covered by Bond Number: 61BSBDH2912

#### FEE & STATE WELL(S) BOND VERIFICATION:

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number 61BSBDH2919  
2. The **FORMER** operator has requested a release of liability from their bond on: n/a\*  
The Division sent response by letter on: n/a

#### LEASE INTEREST OWNER NOTIFICATION:

3. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

#### COMMENTS:

\*Bond rider changed operator name from Inland Production Company to Newfield Production Company - received 2/23/05

012

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

WELL COMPLETION OR RECOMPLETION REPORT AND LOG\*

1a. TYPE OF WORK

OIL WELL ☒ GAS WELL ☐ DRY ☐ Other \_\_\_\_\_

1b. TYPE OF WELL

NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF RESVR. ☐ Other \_\_\_\_\_

2. NAME OF OPERATOR

Newfield Production Company

3. ADDRESS AND TELEPHONE NO.

1401 17th St. Suite 1000 Denver, CO 80202

4. LOCATION OF WELL (Report locations clearly and in accordance with any State requirements.)\*

At Surface 308' FSL & 692' FWL (SW SW) Sec. 10, T9S, R17E

At top prod. Interval reported below

At total depth

14. API NO. 43-013-32504 DATE ISSUED 10/14/2003

12. COUNTY OR PARISH Duchesne

13. STATE UT

15. DATE SPUDDED 7/29/2004

16. DATE T.D. REACHED 8/15/2004

17. DATE COMPL. (Ready to prod.) 9/7/2004

18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\* 5210' GL

5222' KB

19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD

5725'

21. PLUG BACK T.D., MD & TVD

5670'

22. IF MULTIPLE COMPL., HOW MANY\*

23. INTERVALS DRILLED BY ----->

ROTARY TOOLS

X

CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION--TOP, BOTTOM, NAME (MD AND TVD)\*

Green River 4709'-5513'

25. WAS DIRECTIONAL SURVEY MADE

No

26. TYPE ELECTRIC AND OTHER LOGS RUN

Dual Induction Guard, SP, Compensated Density, Compensated Neutron, GR, Caliper, Cement Bond Log

27. WAS WELL CORED

No

23. CASING RECORD (Report all strings set in well)

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
8-5/8" - J-55	24#	301'	12-1/4"	To surface with 150 sx Class "G" cmt	
5-1/2" - J-55	15.5#	5714'	7-7/8"	350 sx Premlite II and 450 sx 50/50 Poz	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-7/8"	EOT @ 5586'	TA @ 5485'

31. PERFORATION RECORD (Interval, size and number)

INTERVAL	SIZE	SPF/NUMBER	DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
(CP4) 5503'-5513'	.41"	4/40	5503'-5513'	Frac w/ 29,479# 20/40 sand in 322 bbls fluid.
(CP.5,1,2) 5308'-11', 5333'-48', 5378'-87'	.41"	4/108	5308'-5387'	Frac w/ 95,060# 20/40 sand in 692 bbls fluid.
(A3) 4980'-4990'	.41"	4/32	4980'-4990'	Frac w/ 60,000# 20/40 sand in 480 bbls fluid.
(B.5) 4709'-4719'	.41"	4/40	4709'-4719'	Frac w/ 46,766# 20/40 sand in 403 bbls fluid.

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

33.\* PRODUCTION

DATE FIRST PRODUCTION 9/7/2004		PRODUCTION METHOD (Flowing, gas lift, pumping--size and type of pump) 2 1/2" x 1 1/2" x 16' RHAC pump				WELL STATUS (Producing or shut-in) PRODUCING	
DATE OF TEST 10 day ave	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD ----->	OIL--BBL. 27	GAS--MCF. 56	WATER--BBL. 6	GAS-OIL RATIO 2074
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE ----->	OIL--BBL.	GAS--MCF.	WATER--BBL.	OIL GRAVITY-API (CORR.)	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Sold & Used for Fuel

TEST WITNESSED BY

OCT 15 2004

35. LIST OF ATTACHMENTS

DIV. OF OIL, GAS & MINING

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Brian Harris

TITLE Engineering Technician

DATE 10/12/2004

Brian Harris

BDH

\*(See Instructions and Spaces for Additional Data on Reverse Side)

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals, and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries);				38. GEOLOGIC MARKERS		
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
			Well Name Blackjack 13-10-9-17	Garden Gulch Mkr	3500'	
				Garden Gulch 1	3688'	
				Garden Gulch 2	3800'	
				Point 3 Mkr	4059'	
				X Mkr	4323'	
				Y-Mkr	4340'	
				Douglas Creek Mkr	4463'	
				BiCarbonate Mkr	4698'	
				B Limestone Mkr	4823'	
				Castle Peak	5280'	
				Basal Carbonate	5704'	
				Total Depth (LOGGERS)	5725'	

## NEWFIELD



October 12, 2004

State of Utah, Division of Oil, Gas and Mining  
Attn: Ms. Carol Daniels  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

Attn: Ms. Carol Daniels

Blackjack 13-10-9-17 (43-013-32504)  
Duchesne County, Utah

Dear Ms. Carol Daniels

Enclosed is a Well Completion or Recompletion Report and Log form (Form 3160-4). We are no longer sending Log copies since Pat Grissom of Phoenix Surveys is already doing so.

If you should have any questions, please contact me at (303) 382-4449.

Sincerely,

Brian Harris  
Engineering Tech

Enclosures

cc: Bureau of Land Management  
Vernal District Office, Division of Minerals  
Attn: Edwin I. Forsman  
170 South 500 East  
Vernal, Utah 84078

Well File – Denver  
Well File – Roosevelt  
Patsy Barreau/Denver  
Bob Jewett/Denver  
Marnie Bryson/Roosevelt

RECEIVED

OCT 15 2004

DIV. OF OIL, GAS & MINING



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8  
1595 WYNKOOP STREET  
DENVER, CO 80202-1129  
<http://www.epa.gov/region8>

JUL 30 2009

Ref: 8P-W-GW

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Mr. Eric Sundberg  
Newfield Production Company  
1001 Seventeenth Street, Suite 2000  
Denver, CO 80202

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
**FOR RECORD ONLY**

Re: Final Permit  
EPA UIC Permit UT21226-08345  
Blackjack Federal 13-10-9-17  
SW SW Sec. 10-T9S-R17E  
Duchesne County, Utah  
API No.: 43-013-32504

Dear Mr. Sundberg:

Enclosed is your copy of the FINAL Underground Injection Control (UIC) Permit for the proposed Blackjack Federal 13-10-9-17 injection well. A Statement of Basis that discusses the conditions and requirements of this EPA UIC Permit, is also included.

The Public Comment period for this Permit ended on JUL 23 2009. No comments on the Draft Permit were received during the Public Notice period; therefore the Effective Date for this EPA UIC Permit is the date of issuance. All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations (CFR) and are regulations that are in effect as of the Effective Date of this Permit.

Please note that under the terms and conditions of this Final Permit you are authorized only to construct the proposed injection well. Prior to commencing injection, you first must fulfill all "Prior to Commencing Injection" requirements of the Final Permit, Part II Section C.1, and obtain written Authorization to Inject from the EPA. It is your responsibility to be familiar with and to comply with all provisions of your Final Permit. The EPA forms referenced in the permit are available at <http://www.epa.gov/safewater/uic/reportingforms.html>. Guidance documents for Cement Bond Logging, Radioactive Tracer testing, Step Rate testing, Mechanical Integrity demonstration, Procedure in the Event of a Mechanical Integrity Loss, and other UIC guidances, are available at [http://www.epa.gov/region8/water/uic/deep\\_injection.html](http://www.epa.gov/region8/water/uic/deep_injection.html). Upon request, hard copies of the EPA forms and guidances can be provided.

**RECEIVED**

**AUG 06 2009**



DIV. OF OIL, GAS & MINING

Printed on Recycled Paper

This EPA UIC Permit is issued for the operating life of the well unless terminated (Part III, Section B). The EPA may review this Permit at least every five (5) years to determine whether any action is warranted pursuant to 40 CFR § 144.36(a).

If you have any questions on the enclosed Final Permit or Statement of Basis, please call Emmett Schmitz of my staff at (303) 312-6174, or toll-free at (800) 227-8917, ext. 312-6174.

FOR RECORD ONLY

Sincerely,




Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

enclosure: Final UIC Permit  
Statement of Basis  
Final Aquifer Exemption

cc: Letter:

Uintah & Ouray Business Committee,  
Ute Indian Tribe:  
Curtis Cesspooch, Chairman  
Irene Cuch, Vice-Chairwoman  
Frances Poowegup, Councilwoman  
Ronald Groves, Councilman  
Phillip Chimburas, Councilman  
Steven Cesspooch, Councilman

Daniel Picard, Superintendent  
Uintah & Ouray Indian Agency  
U.S. Bureau of Indian Affairs

cc: all enclosures:

Michael Guinn  
District Manager  
Newfield Production Company  
Myton, Utah



Larry Love  
Director  
Energy & Minerals Dept.  
Ute Indian Tribe

Ferron Secakuku  
Director, Natural Resources  
Ute Indian Tribe

Gilbert Hunt  
Associate Director  
State of Utah - Natural Resources

Fluid Minerals Engineering Dept.  
U.S. Bureau of Land Management  
Vernal, Utah



**UNDERGROUND INJECTION CONTROL PROGRAM  
PERMIT**

PREPARED: July 2009

**Permit No. UT21226-08345**

Class II Enhanced Oil Recovery Injection Well

**Blackjack Federal 13-10-9-17  
Duchesne County, UT**

Issued To

**Newfield Production Company**

1001 Seventeenth Street, Suite 2000

Denver, CO 80202



## Part I. AUTHORIZATION TO CONSTRUCT AND OPERATE

Under the authority of the Safe Drinking Water Act and Underground Injection Control (UIC) Program regulations of the U. S. Environmental Protection Agency (EPA) codified at Title 40 of the Code of Federal Regulations (40 CFR) Parts 2, 124, 144, 146, and 147, and according to the terms of this Permit,

Newfield Production Company  
1001 Seventeenth Street, Suite 2000  
Denver, CO 80202

is authorized to construct and to operate the following Class II injection well or wells:

Blackjack Federal 13-10-9-17  
308' FSL & 692' FWL, SWSW S10, T9S, R17E  
Duchesne County, UT

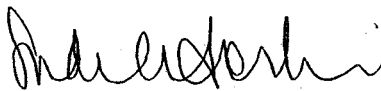
EPA regulates the injection of fluids into injection wells so that injection does not endanger underground sources of drinking water (USDWs). EPA UIC Permit conditions are based on authorities set forth at 40 CFR Parts 144 and 146, and address potential impacts to USDWs.


Under 40 CFR Part 144, Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General permit conditions for which the content is mandatory and not subject to site-specific differences are not discussed in this document. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize injury to persons or property or invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. (40 CFR §144.35) An EPA UIC Permit may be issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR §§144.39, 144.40 and 144.41, and may be reviewed at least once every five (5) years to determine if action is required under 40 CFR §144.36(a).

This Permit is issued for the life of the well(s) unless modified, revoked and reissued, or terminated under 40 CFR 144.39 or 144.40. This EPA Permit may be adopted, modified, revoked and reissued, or terminated if primary enforcement authority for a UIC Program is delegated to an Indian Tribe or State. Upon the effective date of delegation, reports, notifications, questions and other correspondence should be directed to the Indian Tribe or State Director.

Issue Date: JUL 30 2009

Effective Date JUL 30 2009



 Stephen S. Tuber  
Assistant Regional Administrator\*  
Office of Partnerships and Regulatory Assistance

\*NOTE: The person holding this title is referred to as the "Director" throughout this Permit.

## **PART II. SPECIFIC PERMIT CONDITIONS**

### **Section A. WELL CONSTRUCTION REQUIREMENTS**

These requirements represent the approved minimum construction standards for well casing and cement, injection tubing, and packer.

Details of the approved well construction plan are incorporated into this Permit as APPENDIX A. Changes to the approved plan that may occur during construction must be approved by the Director prior to being physically incorporated.

#### **1. Casing and Cement.**

The well or wells shall be cased and cemented to prevent the movement of fluids into or between underground sources of drinking water. The well casing and cement shall be designed for the life expectancy of the well and of the grade and size shown in APPENDIX A. Remedial cementing may be required if shown to be inadequate by cement bond log or other attempted demonstration of Part II (External) mechanical integrity.

#### **2. Injection Tubing and Packer.**

Injection tubing is required, and shall be run and set with a packer at or below the depth indicated in APPENDIX A. The packer setting depth may be changed provided it remains below the depth indicated in APPENDIX A and the Permittee provides notice and obtains the Director's approval for the change.

#### **3. Sampling and Monitoring Devices.**

The Permittee shall install and maintain in good operating condition:

- (a) a "tap" at a conveniently accessible location on the injection flow line between the pump house or storage tanks and the injection well, isolated by shut-off valves, for collection of representative samples of the injected fluid; and
- (b) one-half (1/2) inch female iron pipe fitting, isolated by shut-off valves and located at the wellhead at a conveniently accessible location, for the attachment of a pressure gauge capable of monitoring pressures ranging from normal operating pressures up to the Maximum Allowable Injection Pressure specified in APPENDIX C:
  - (i) on the injection tubing; and
  - (ii) on the tubing-casing annulus (TCA); and
- (c) a pressure actuated shut-off device attached to the injection flow line set to shut-off the injection pump when or before the Maximum Allowable Injection Pressure (MAIP) specified in APPENDIX C is reached at the wellhead; and
- (d) a non-resettable cumulative volume recorder attached to the injection line.

#### **4. Well Logging and Testing**

Well logging and testing requirements are found in APPENDIX B. The Permittee shall ensure the log and test requirements are performed within the time frames specified in APPENDIX B. Well logs and tests shall be performed according to current EPA-approved procedures. Well log and test results shall be submitted to the Director within sixty (60) days of completion of the logging or testing activity, and shall include a report describing the methods used during logging or testing and an interpretation of the test or log results.

#### **5. Postponement of Construction or Conversion**

The Permittee shall complete well construction within one year of the Effective Date of the Permit, or in the case of an Area Permit within one year of Authorization of the additional well. Authorization to construct and operate shall expire if the well has not been constructed within one year of the Effective Date of the Permit or Authorization and the Permit may be terminated under 40 CFR 144.40, unless the Permittee has notified the Director and requested an extension prior to expiration. Notification shall be in writing, and shall state the reasons for the delay and provide an estimated completion date. Once Authorization has expired under this part, the complete permit process including opportunity for public comment may be required before Authorization to construct and operate may be reissued.

#### **6. Workovers and Alterations**

Workovers and alterations shall meet all conditions of the Permit. Prior to beginning any addition or physical alteration to an injection well that may significantly affect the tubing, packer or casing, the Permittee shall give advance notice to the Director and obtain the Director's approval. The Permittee shall record all changes to well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workover, logging, or test data to EPA within sixty (60) days of completion of the activity.

A successful demonstration of Part I MI is required following the completion of any well workover or alteration which affects the casing, tubing, or packer. Injection operations shall not be resumed until the well has successfully demonstrated mechanical integrity and the Director has provided written approval to resume injection.

### **Section B. MECHANICAL INTEGRITY**

The Permittee is required to ensure each injection well maintains mechanical integrity at all times. The Director, by written notice, may require the Permittee to comply with a schedule describing when mechanical integrity demonstrations shall be made.

An injection well has mechanical integrity if:

- (a) There is no significant leak in the casing, tubing, or packer (Part I); and
- (b) There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore (Part II).

### **1. Demonstration of Mechanical Integrity (MI).**

The operator shall demonstrate MI prior to commencing injection and periodically thereafter. Well-specific conditions dictate the methods and the frequency for demonstrating MI and are discussed in the Statement of Basis. The logs and tests are designed to demonstrate both internal (Part I) and external (Part II) MI as described above. The conditions present at this well site warrant the methods and frequency required in Appendix B of this Permit.

In addition to these regularly scheduled demonstrations of MI, the operator shall demonstrate internal (Part I) MI after any workover which affects the tubing, packer or casing.

The Director may require additional or alternative tests if the results presented by the operator are not satisfactory to the Director to demonstrate there is no movement of fluid into or between USDWs resulting from injection activity. Results of MI tests shall be submitted to the Director as soon as possible but no later than sixty (60) days after the test is complete.

### **2. Mechanical Integrity Test Methods and Criteria**

EPA-approved methods shall be used to demonstrate mechanical integrity. Ground Water Section Guidance No. 34 "Cement Bond Logging Techniques and Interpretation", Ground Water Section Guidance No. 37, "Demonstrating Part II (External) Mechanical Integrity for a Class II injection well permit", and Ground Water Section Guidance No. 39, "Pressure Testing Injection Wells for Part I (Internal) Mechanical Integrity" are available from EPA and will be provided upon request.

The Director may stipulate specific test methods and criteria best suited for a specific well construction and injection operation.

### **3. Notification Prior to Testing.**

The Permittee shall notify the Director at least 30 days prior to any scheduled mechanical integrity test. The Director may allow a shorter notification period if it would be sufficient to enable EPA to witness the mechanical integrity test. Notification may be in the form of a yearly or quarterly schedule of planned mechanical integrity tests, or it may be on an individual basis.

### **4. Loss of Mechanical Integrity.**

If the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity becomes evident during operation (such as presence of pressure in the TCA, water flowing at the surface, etc.), the Permittee shall notify the Director within 24 hours (see Part III Section E Paragraph 11(e) of this Permit) and the well shall be shut-in within 48 hours unless the Director requires immediate shut-in.

Within five days, the Permittee shall submit a follow-up written report that documents test results, repairs undertaken or a proposed remedial action plan.

Injection operations shall not be resumed until after the well has successfully been repaired and demonstrated mechanical integrity, and the Director has provided approval to resume injection.

## **Section C. WELL OPERATION**

**INJECTION BETWEEN THE OUTERMOST CASING PROTECTING UNDERGROUND SOURCES OF DRINKING WATER AND THE WELL BORE IS PROHIBITED.**

Injection is approved under the following conditions:

### **1. Requirements Prior to Commencing Injection.**

Well injection, including for new wells authorized by an Area Permit under 40 CFR 144.33 (c), may commence only after all well construction and pre-injection requirements herein have been met and approved. The Permittee may not commence injection until construction is complete, and

- (a) The Permittee has submitted to the Director a notice of completion of construction and a completed EPA Form 7520-10 or 7520-12; all applicable logging and testing requirements of this Permit (see APPENDIX B) have been fulfilled and the records submitted to the Director; mechanical integrity pursuant to 40 CFR 146.8 and Part II Section B of this Permit has been demonstrated; and
  - (i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the Permit; or
  - (ii) The Permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in Paragraph 1a, in which case prior inspection or review is waived and the Permittee may commence injection.

### **2. Injection Interval.**

Injection is permitted only within the approved injection interval, listed in APPENDIX C. Additional individual injection perforations may be added provided that they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6.

### **3. Injection Pressure Limitation**

- (a) The permitted Maximum Allowable Injection Pressure (MAIP), measured at the wellhead, is found in APPENDIX C. Injection pressure shall not exceed the amount the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs. In no case shall injection pressure cause the movement of injection or formation fluids into a USDW.
- (b) The Permittee may request a change of the MAIP, or the MAIP may be increased or decreased by the Director in order to ensure that the requirements in Paragraph (a) above are fulfilled. The Permittee may be required to conduct a step rate injection test or other suitable test to provide information for determining the fracture pressure of the injection zone. Change of the permitted MAIP by the Director shall be by modification of this Permit and APPENDIX C.

#### **4. Injection Volume Limitation.**

Injection volume is limited to the total volume specified in APPENDIX C.

#### **5. Injection Fluid Limitation.**

Injected fluids are limited to those identified in 40 CFR 144.6(b)(2) as fluids used for enhanced recovery of oil or natural gas, including those which are brought to the surface in connection with conventional oil or natural gas production that may be commingled with waste waters from gas plants which are an integral part of production operations unless those waters are classified as a hazardous waste at the time of injection, pursuant to 40 CFR 144.6(b). Non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are NOT approved for injection. This well is NOT approved for commercial brine injection, industrial waste fluid disposal or injection of hazardous waste as defined by CFR 40 Part 261. The Permittee shall provide a listing of the sources of injected fluids in accordance with the reporting requirements in Part II Section D Paragraph 4 and APPENDIX D of this Permit.

#### **6. Tubing-Casing Annulus (TCA)**

The tubing-casing annulus (TCA) shall be filled with water treated with a corrosion inhibitor, or other fluid approved by the Director. The TCA valve shall remain closed during normal operating conditions and the TCA pressure shall be maintained at zero (0) psi.

If TCA pressure cannot be maintained at zero (0) psi, the Permittee shall follow the procedures in Ground Water Section Guidance No. 35 "Procedures to follow when excessive annular pressure is observed on a well."

### **Section D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS**

#### **1. Monitoring Parameters, Frequency, Records and Reports.**

Monitoring parameters are specified in APPENDIX D. Pressure monitoring recordings shall be taken at the wellhead. The listed parameters are to be monitored, recorded and reported at the frequency indicated in APPENDIX D even during periods when the well is not operating.

Monitoring records must include:

- (a) the date, time, exact place and the results of the observation, sampling, measurement, or analysis, and;
- (b) the name of the individual(s) who performed the observation, sampling, measurement, or analysis, and;
- (c) the analytical techniques or methods used for analysis.

#### **2. Monitoring Methods.**

- (a) Monitoring observations, measurements, samples, etc. taken for the purpose of complying with these requirements shall be representative of the activity or condition being monitored.

- (b) Methods used to monitor the nature of the injected fluids must comply with analytical methods cited and described in Table 1 of 40 CFR 136.3 or Appendix III of 40 CFR 261, or by other methods that have been approved in writing by the Director.
- (c) Injection pressure, annulus pressure, injection rate, and cumulative injected volumes shall be observed and recorded at the wellhead under normal operating conditions, and all parameters shall be observed simultaneously to provide a clear depiction of well operation.
- (d) Pressures are to be measured in pounds per square inch (psi).
- (e) Fluid volumes are to be measured in standard oil field barrels (bbl).
- (f) Fluid rates are to be measured in barrels per day (bbl/day).

### **3. Records Retention.**

- (a) Records of calibration and maintenance, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a period of AT LEAST THREE (3) YEARS from the date of the sample, measurement, report, or application. This period may be extended anytime prior to its expiration by request of the Director.
- (b) Records of the nature and composition of all injected fluids must be retained until three (3) years after the completion of any plugging and abandonment (P&A) procedures specified under 40 CFR 144.52(a)(6) or under Part 146 Subpart G, as appropriate. The Director may require the Permittee to deliver the records to the Director at the conclusion of the retention period. The Permittee shall continue to retain the records after the three (3) year retention period unless the Permittee delivers the records to the Director or obtains written approval from the Director to discard the records.

### **4. Annual Reports.**

Whether the well is operating or not, the Permittee shall submit an Annual Report to the Director that summarizes the results of the monitoring required by Part II Section D and APPENDIX D.

The first Annual Report shall cover the period from the effective date of the Permit through December 31 of that year. Subsequent Annual Reports shall cover the period from January 1 through December 31 of the reporting year. Annual Reports shall be submitted by February 15 of the year following data collection. EPA Form 7520-11 may be copied and shall be used to submit the Annual Report, however, the monitoring requirements specified in this Permit are mandatory even if EPA Form 7520-11 indicates otherwise.

## **Section E. PLUGGING AND ABANDONMENT**

### **1. Notification of Well Abandonment, Conversion or Closure.**

The Permittee shall notify the Director in writing at least forty-five (45) days prior to: 1) plugging and abandoning an injection well, 2) converting to a non-injection well, and 3) in the case of an Area Permit, before closure of the project.

### **2. Well Plugging Requirements**

Prior to abandonment, the injection well shall be plugged with cement in a manner which isolates the injection zone and prevents the movement of fluids into or between underground sources of drinking water, and in accordance with 40 CFR 146.10 and other applicable Federal, State or local law or regulations. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.6 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. Prior to placement of the cement plug(s) the well shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director.

### **3. Approved Plugging and Abandonment Plan.**

The approved plugging and abandonment plan is incorporated into this Permit as APPENDIX E. Changes to the approved plugging and abandonment plan must be approved by the Director prior to beginning plugging operations. The Director also may require revision of the approved plugging and abandonment plan at any time prior to plugging the well.

### **4. Forty Five (45) Day Notice of Plugging and Abandonment.**

The Permittee shall notify the Director at least forty-five (45) days prior to plugging and abandoning a well and provide notice of any anticipated change to the approved plugging and abandonment plan.

### **5. Plugging and Abandonment Report.**

Within sixty (60) days after plugging a well, the Permittee shall submit a report (EPA Form 7520-13) to the Director. The plugging report shall be certified as accurate by the person who performed the plugging operation. Such report shall consist of either:

- (a) A statement that the well was plugged in accordance with the approved plugging and abandonment plan; or
- (b) Where actual plugging differed from the approved plugging and abandonment plan, an updated version of the plan, on the form supplied by the Director, specifying the differences.

### **6. Inactive Wells.**

After any period of two years during which there is no injection the Permittee shall plug and abandon the well in accordance with Part II Section E Paragraph 2 of this Permit unless the Permittee:



- (a) Provides written notice to the Director;
- (b) Describes the actions or procedures the Permittee will take to ensure that the well will not endanger USDWs during the period of inactivity. These actions and procedures shall include compliance with mechanical integrity demonstration, Financial Responsibility and all other permit requirements designed to protect USDWs; and
- (c) Receives written notice by the Director temporarily waiving plugging and abandonment requirements.

## **PART III. CONDITIONS APPLICABLE TO ALL PERMITS**

### **Section A. EFFECT OF PERMIT**

The Permittee is allowed to engage in underground injection in accordance with the conditions of this Permit. The Permittee shall not construct, operate, maintain, convert, plug, abandon, or conduct any other activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR 142 or may otherwise adversely affect the health of persons. Any underground injection activity not authorized by this Permit or by rule is prohibited. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of any other Federal, State or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA) or any other law governing protection of public health or the environment, for any imminent and substantial endangerment to human health or the environment, nor does it serve as a shield to the Permittee's independent obligation to comply with all UIC regulations. Nothing in this Permit relieves the Permittee of any duties under applicable regulations.

### **Section B. CHANGES TO PERMIT CONDITIONS**

#### ***1. Modification, Reissuance, or Termination.***

The Director may, for cause or upon a request from the Permittee, modify, revoke and reissue, or terminate this Permit in accordance with 40 CFR 124.5, 144.12, 144.39, and 144.40. Also, this Permit is subject to minor modification for causes as specified in 40 CFR 144.41. The filing of a request for modification, revocation and reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any condition of this Permit.

#### ***2. Conversions.***

The Director may, for cause or upon a written request from the Permittee, allow conversion of the well from a Class II injection well to a non-Class II well. Conversion may not proceed until the Permittee receives written approval from the Director. Conditions of such conversion may include but are not limited to, approval of the proposed well rework, follow up demonstration of mechanical integrity, well-specific monitoring and reporting following the conversion, and demonstration of practical use of the converted configuration.

#### ***3. Transfer of Permit.***

Under 40 CFR 144.38, this Permit is transferable provided the current Permittee notifies the Director at least thirty (30) days in advance of the proposed transfer date (EPA Form 7520-7) and provides a written agreement between the existing and new Permittees containing a specific date for transfer of Permit responsibility, coverage and liability between them. The notice shall adequately demonstrate that the financial responsibility requirements of 40 CFR 144.52(a)(7) will be met by the new Permittee. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act; in some cases, modification or revocation and reissuance is mandatory.

#### **4. Permittee Change of Address.**

Upon the Permittee's change of address, or whenever the operator changes the address where monitoring records are kept, the Permittee must provide written notice to the Director within 30 days.

#### **5. Construction Changes, Workovers, Logging and Testing Data**

The Permittee shall give advance notice to the Director, and shall obtain the Director's written approval prior to any physical alterations or additions to the permitted facility. Alterations or workovers shall meet all conditions as set forth in this permit. The Permittee shall record any changes to the well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workovers, logging, or test data to EPA within sixty (60) days of completion of the activity.

Following the completion of any well workovers or alterations which affect the casing, tubing, or packer, a successful demonstration of mechanical integrity (Part III, Section F of this Permit) shall be made, and written authorization from the Director received, prior to resuming injection activities.

### **Section C. SEVERABILITY**

The Provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

### **Section D. CONFIDENTIALITY**

In accordance with 40 CFR Part 2 and 40 CFR 144.5, information submitted to EPA pursuant to this Permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- The name and address of the Permittee, and
- information which deals with the existence, absence or level of contaminants in drinking water.

### **Section E. GENERAL PERMIT REQUIREMENTS**

#### **1. Duty to Comply.**

The Permittee must comply with all conditions of this Permit. Any noncompliance constitutes a violation of the Safe Drinking Water Act (SDWA) and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the Permittee need not comply with the provisions of this Permit to the extent and for the duration such noncompliance is authorized in an emergency permit under 40 CFR 144.34. All violations of the SDWA may subject the Permittee to penalties and/or criminal prosecution as specified in Section 1423 of the SDWA.

## **2. Duty to Reapply.**

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, under 40 CFR 144.37 the Permittee must apply for a new permit prior to the expiration date.

## **3. Need to Halt or Reduce Activity Not a Defense.**

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

## **4. Duty to Mitigate.**

The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Permit.

## **5. Proper Operation and Maintenance.**

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit.

## **6. Permit Actions.**

This Permit may be modified, revoked and reissued or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

## **7. Property Rights.**

This Permit does not convey any property rights of any sort, or any exclusive privilege.

## **8. Duty to Provide Information.**

The Permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit. The Permittee is required to submit any information required by this Permit or by the Director to the mailing address designated in writing by the Director.

## **9. Inspection and Entry.**

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and,
- (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

#### **10. Signatory Requirements.**

All applications, reports or other information submitted to the Director shall be signed and certified according to 40 CFR 144.32. This section explains the requirements for persons duly authorized to sign documents, and provides wording for required certification.

#### **11. Reporting Requirements.**

- (a) Planned changes. The Permittee shall give notice to the Director as soon as possible of any planned changes, physical alterations or additions to the permitted facility, and prior to commencing such changes.
- (b) Anticipated noncompliance. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (c) Monitoring Reports. Monitoring results shall be reported at the intervals specified in this Permit.
- (d) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 30 days following each schedule date.
- (e) Twenty-four hour reporting. The Permittee shall report to the Director any noncompliance which may endanger human health or the environment, including:
  - (i) Any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW; or
  - (ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.

Information shall be provided, either directly or by leaving a message, within twenty-four (24) hours from the time the permittee becomes aware of the circumstances by telephoning (800) 227-8917 and requesting EPA Region VIII UIC Program Compliance and Technical Enforcement Director, or by contacting the EPA Region VIII Emergency Operations Center at (303) 293-1788.

In addition, a follow up written report shall be provided to the Director within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

- (f) **Oil Spill and Chemical Release Reporting:** The Permittee shall comply with all reporting requirements related to the occurrence of oil spills and chemical releases by contacting the National Response Center (NRC) at (800) 424-8802, (202) 267-2675, or through the NRC website <http://www.nrc.uscg.mil/index.htm>.
- (g) **Other Noncompliance.** The Permittee shall report all instances of noncompliance not reported under paragraphs Part III, Section E Paragraph 11(b) or Section E, Paragraph 11(e) at the time the monitoring reports are submitted. The reports shall contain the information listed in Paragraph 11(e) of this Section.
- (h) **Other information.** Where the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director.

## **Section F. FINANCIAL RESPONSIBILITY**

### ***1. Method of Providing Financial Responsibility.***

The Permittee shall maintain continuous compliance with the requirement to maintain financial responsibility and resources to close, plug, and abandon the underground injection well(s). No substitution of a demonstration of financial responsibility shall become effective until the Permittee receives written notification from the Director that the alternative demonstration of financial responsibility is acceptable. The Director may, on a periodic basis, require the holder of a permit to revise the estimate of the resources needed to plug and abandon the well to reflect changes in such costs and may require the Permittee to provide a revised demonstration of financial responsibility.

### ***2. Insolvency.***

In the event of:

- (a) the bankruptcy of the trustee or issuing institution of the financial mechanism; or
- (b) suspension or revocation of the authority of the trustee institution to act as trustee; or

- (c) the institution issuing the financial mechanism losing its authority to issue such an instrument

the Permittee must notify the Director in writing, within ten (10) business days, and the Permittee must establish other financial assurance or liability coverage acceptable to the Director within sixty (60) days after any event specified in (a), (b), or (c) above.

The Permittee must also notify the Director by certified mail of the commencement of voluntary or involuntary proceedings under Title 11 (Bankruptcy), U.S. Code naming the owner or operator as debtor, within ten (10) business days after the commencement of the proceeding. A guarantor, if named as debtor of a corporate guarantee, must make such a notification as required under the terms of the guarantee.

## APPENDIX A

### WELL CONSTRUCTION REQUIREMENTS

See diagram.

Blackjack Federal No. 13-10-9-17 was drilled to a total depth of 5,725 feet (KB) feet in the Basal Carbonate Member. Plug back total depth (PBSD) is 5,670 feet.

Surface casing (8-5/8 inch) was set at a depth of 301 feet in a 12-1/4 inch hole using 150 sacks of Class "G" cement which was circulated to the surface.

Production casing (5-1/2 inch) was set at a depth of 5,714 feet (KB) in a 7-7/8 inch hole with 350 sacks of Premium Lite II mixed and 450 sacks of 50/50 Pozmix. Top of cement by Cement Bond Log is 140 feet from surface.

CBL analysis does identify adequate 80% bond index cement bond within the Confining Zone.

The schematic diagram shows enhanced recovery injection perforations in the Douglas Creek Member of the Green River Formation. Additional perforations may be added at a later time between the depths of 3,496 feet (top of Garden Gulch Member) and the estimated top of the Wasatch Formation (5,829 feet) provided the operator first notifies the Director and later submits an updated well completion report (EPA Form 7520-12) and schematic diagram.

The packer will be set no higher than 100 feet above the top perforation.



UT 21226-08345

# Blackjack Federal 13-10-9-17

Spud Date: 7/29/2004

Put on Production: 9/7/2004

GL: 5210' KB: 5222'

Proposed Injection  
Wellbore Diagram

Initial Production: BOPD,  
MCFD, BWPD

## SURFACE CASING

CSG SIZE: 8-5/8"

GRADE: J-55

WEIGHT: 24#

LENGTH: 7 jts. (290.9')

DEPTH LANDED: 300.9' KB

HOLE SIZE: 12 1/4"

CEMENT DATA: 150sxs Class "G" mixed emt, est 3 bbls emt to surf.

Cement Top @ 140'

*Base USDWs 225'*

## PRODUCTION CASING

CSG SIZE: 5-1/2"

GRADE: J-55

WEIGHT: 15.5#

LENGTH: 135 jts. (5715.99')

DEPTH LANDED: 5713.99' KB

HOLE SIZE: 7 7/8"

CEMENT DATA: 350 sxs Prem. Lite II mixed & 450 sxs 50/50 POZ mix.

CEMENT TOP AT: 140'

*Green River 1280'*

*Tons 2684-2730'*

*Mahogany B 2730'-46'*

*80% Bond 3250'-3560'*

## TUBING

SIZE/GRADE/WT.: 2-7/8" / J-55 / 6.5#

NO. OF JOINTS: 170 jts (5472.85')

TUBING ANCHOR: 5485.35' KB

NO. OF JOINTS: 1 jt (32.19')

SEATING NIPPLE: 2-7/8" (1.10')

SN LANDED AT: 5520.34' KB

NO. OF JOINTS: 2 jts (64.39')

TOTAL STRING LENGTH: EOT @ 5586.28' w/ 12.5' KB

## FRAC JOB

8/27/04

Frac CP5 sands as follows:  
Decision made to skip Stage #1

8/31/04 5503-5513'

Frac CP4 sands as follows:  
29,479# 20/40 sand in 322 bbls lightning Frac  
17 fluid. Treated @ avg press of 1590 psi  
w/avg rate of 24.8 BPM. ISIP 1590 psi. Calc  
flush: 5501 gal. Actual flush: 5502 gal.

8/31/04 5308-5387'

Frac CP2, CP1 & CP.5 sands as follows:  
95,060# 20/40 sand in 692 bbls lightning Frac  
17 fluid. Treated @ avg press of 1555 psi  
w/avg rate of 24.9 BPM. ISIP 1700 psi. Calc  
flush: 5306 gal. Actual flush: 5305 gal.

9/1/04 4980-4990'

Frac A3 sands as follows:  
60,000# 20/40 sand in 480 bbls lightning Frac  
17 fluid. Treated @ avg press of 1345 psi  
w/avg rate of 24.9 BPM. ISIP 1600 psi. Calc  
flush: 4978 gal. Actual flush: 4977 gal.

9/1/04 4709-4719'

Frac B.5 sands as follows:  
46,766# 20/40 sand in 403 bbls lightning Frac  
17 fluid. Treated @ avg press of 1620 psi  
w/avg rate of 24.8 BPM. ISIP 1775 psi. Calc  
flush: 4707 gal. Actual flush: 4624 gal.

*3298-3496' Confining Zone*  
*3496' Garden Gulch*

*4462' Douglas Creek*

## PERFORATION RECORD

8/27/04	5503-5513'	4 JSPF	40 holes
8/31/04	5378-5387'	4 JSPF	36 holes
8/31/04	5333-5348'	4 JSPF	60 holes
8/31/04	5308-5311'	4 JSPF	12 holes
8/31/04	4980-4990'	4 JSPF	40 holes
9/01/04	4709-4719'	4 JSPF	40 holes

Packer @ 4674'

4709-4719'

4980-4990'

5308-5311'

5333-5348'

5378-5387'

5503-5513'

*TD COL 5615'*  
Top of Fill & PB1D @ 5670'

SHOE @ 5714'

TD @ 5725'

*5704' Basal Carbonate*

*Est. Masatah 5829'*

NEWFIELD

Blackjack Federal 13-10-9-17

308' FSL & 692' FWL

SW/SW Section 10-T9S-R17E

Duchesne County, Utah

API #43-013-32504; Lease #UTU-70821

MS 12/3/2008

## APPENDIX B

### LOGGING AND TESTING REQUIREMENTS

#### Logs.

Logs will be conducted according to current UIC guidance. It is the responsibility of the Permittee to obtain and use guidance prior to conducting any well logging required as a condition of this permit.

### NO LOGGING REQUIREMENTS

#### Tests.

Tests will be conducted according to current UIC guidance. It is the responsibility of the Permittee to obtain and use guidance prior to conducting any well test required as a condition of this permit.

<b>WELL NAME:</b> Blackjack Federal 13-10-9-17	
<b>TYPE OF TEST</b>	<b>DATE DUE</b>
Standard Annulus Pressure	Prior to receiving authorization to inject and at least once within any five (5) year period following the last successful test.
Pore Pressure	Prior to receiving authorization to inject.

## APPENDIX C

### OPERATING REQUIREMENTS

#### MAXIMUM ALLOWABLE INJECTION PRESSURE:

Maximum Allowable Injection Pressure (MAIP) as measured at the surface shall not exceed the pressure(s) listed below.

WELL NAME	MAXIMUM ALLOWED INJECTION PRESSURE (psi)
	ZONE 1 (Upper)
Blackjack Federal 13-10-9-17	1,315

#### INJECTION INTERVAL(S):

Injection is permitted only within the approved injection interval listed below. Injection perforations may be altered provided they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6. Specific injection perforations can be found in Appendix A.

WELL NAME: Blackjack Federal 13-10-9-17			
FORMATION NAME	APPROVED INJECTION INTERVAL (KB, ft)		FRACTURE GRADIENT (psi/ft)
	TOP	BOTTOM	
Green River	3,496.00 - 5,829.00		0.720

#### ANNULUS PRESSURE:

The annulus pressure shall be maintained at zero (0) psi as measured at the wellhead. If this pressure cannot be maintained, the Permittee shall follow the procedures listed under Part II, Section C. 6. of this permit.

#### MAXIMUM INJECTION VOLUME:

WELL NAME: Blackjack Federal 13-10-9-17	
FORMATION NAME	MAXIMUM VOLUME LIMIT (bbls)
Green River	

## APPENDIX D

### MONITORING AND REPORTING PARAMETERS

This is a listing of the parameters required to be observed, recorded, and reported. Refer to the permit Part II, Section D, for detailed requirements for observing, recording, and reporting these parameters.

OBSERVE MONTHLY AND RECORD AT LEAST ONCE EVERY THIRTY DAYS	
OBSERVE AND RECORD	Injection pressure (psig)
	Annulus pressure(s) (psig)
	Injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbls)
ANNUALLY	
ANALYZE	Injected fluid total dissolved solids (mg/l)
	Injected fluid specific gravity
	Injected fluid specific conductivity
	Injected fluid pH
ANNUALLY	
REPORT	Each month's maximum and averaged injection pressures (psig)
	Each month's maximum and minimum annulus pressure(s) (psig)
	Each month's injected volume (bbl)
	Fluid volume injected since the well began injecting (bbl)
	Written results of annual injected fluid analysis
	Sources of all fluids injected during the year

In addition to these items, additional Logging and Testing results may be required periodically. For a list of those items and their due dates, please refer to APPENDIX B - LOGGING AND TESTING REQUIREMENTS.

## APPENDIX E

### PLUGGING AND ABANDONMENT REQUIREMENTS

See diagram.

The well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs and in accordance with other applicable Federal, State or local law or regulation. Tubing, packers, and any downhole apparatus shall be removed. Class A, C, G, and H cements, with additives such as accelerators and retarders that control or enhance cement properties, may be used for plugs. However, volume extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. Within sixty (60) days after plugging, the owner or operator shall submit Plugging Record (EPA Form 7520-13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. At a minimum, the following plugs are required:

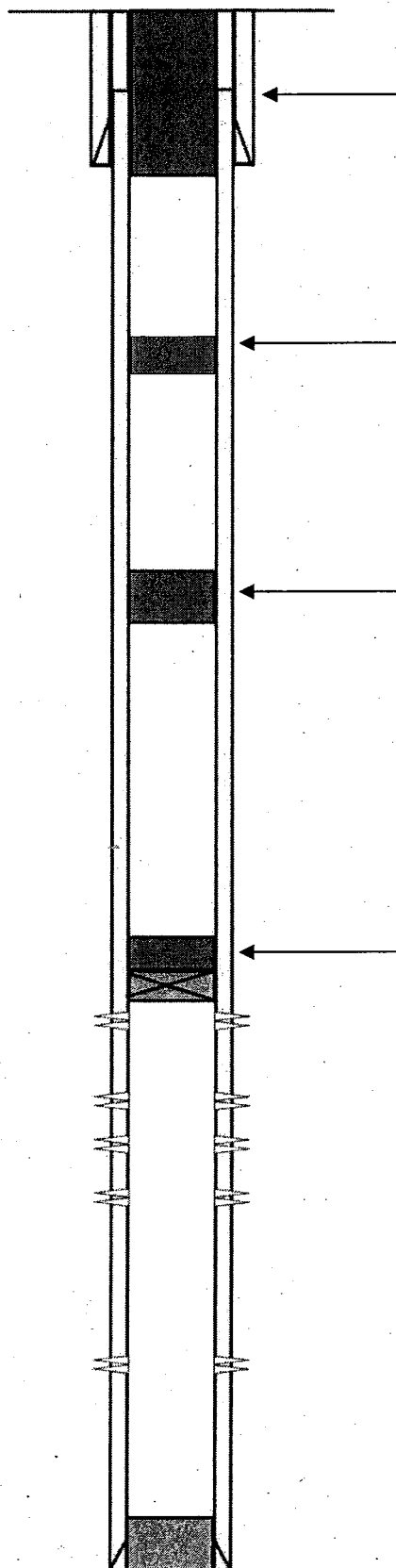
**PLUG NO. 1: Seal Injection Zone:** Set a cast iron bridge plug (CIBP) no more than fifty (50) feet above the top injection perforation. Place at least twenty (20) feet of cement plug on top of the CIBP.

**PLUG NO. 2: Seal Mahogany Shale and Trona intervals:** Squeeze a cement plug on the backside of the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale approximately 2,635 feet to 2,800 feet (unless pre-existing backside cement precludes cement-squeezing this interval) followed by a minimum 165-foot balanced cement plug inside the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale, approximately 2,635 feet to 2,800 feet.

**PLUG NO. 3: Seal USDWs:** Squeeze a cement plug (1,220 feet - 1,340 feet) on the backside of the 5-1/2 inch casing across the base of the Uinta formation (unless pre-existing backside cement precludes cement-squeezing this interval), followed by a minimum 120-foot balanced 1,220 feet to 1,340 feet.

**PLUG NO.4: Seal Surface:** Set a Class "G" cement plug within the 5-1/2 inch casing to 351 feet and up the 5-1/2 inch by 8-5/8 inch casings annulus to the surface.

## Plugging and Abandonment Diagram for Blackjack Fed'l. No. 13-10-9-17



Plug 4: Set a Class "G" cement plug within the 5-1/2 inch casing beginning at 351 feet and up the 5-1/2 inch X 8-5/8 inch casing annulus to the surface.

Plug 3: Perforate and squeeze cement up the backside of the casing across the contact between the Uinta Formation and Green River Formation 1,220 feet – 1,340 feet (KB) unless pre-existing backside cement precludes cement-squeezing this interval. Set a minimum 120-foot cement plug inside the casing from approximately 1,220 feet – 1,340 feet.

Plug 2: Perforate and squeeze cement up the backside of the casing across the Trona and Mahogany Bench from approximately 2,635 feet – 2,800 feet (KB) unless pre-existing backside cement precludes cement-squeezing this interval. Set a minimum 165-foot balanced cement plug inside the casing from approximately 2,635 feet – 2,800 feet.

Plug 1: Set a cast iron bridge plug (CIBP) no more than 50 feet above the top perforation with a minimum of 20 feet cement plug on top of the CIBP.

## **APPENDIX F**

### **CORRECTIVE ACTION REQUIREMENTS**

South Pleasant Valley No. 4-15-9-17 will be monitored weekly at the surface for evidence of fluid movement out of the injection zone.

In addition, Newfield developed a corrective action monitoring program, effective July 10, 2008, entitled "Procedure related to proposed Class II Enhanced Oil Recovery Injection Wells determined by the EPA to have specific Area of Review (AOR) wells with inadequate cement across the Confining Zone".

If possible fluid movement out of the injection zone is identified, either through the weekly monitoring, through Newfield's July 10, 2008 procedure described above, or through any other means (for example, evidence of fluid flow or increased bradenhead annulus pressure readings, tubing-casing annulus pressure readings, or other evidence of a mechanical integrity failure), the Permittee will shut in the Blackjack Federal No. 13-10-9-17 immediately and notify the Director. No injection into the Blackjack Federal No. 13-10-9-17 will be permitted until the Permittee has notified the Director that the situation has been resolved, submitted Rework Records (EPA Form No. 7520-12) and a schematic diagram, and received authorization from the Director to re-commence injection.



**RE: Procedure related to proposed Class II Enhanced Oil Recovery Injection Wells determined by the EPA to have specific Area of Review (AOR) wells with inadequate cement across the confining zone**

Effective July 10, 2008 Newfield Production Company will implement the following procedure to address concerns related to protection of Underground Sources of Drinking Water (USDW) in AOR wells where the interval of cement bond index across the confining zone behind pipe has been determined to be inadequate. The procedure is intended to meet the corrective action requirements found in the UIC Class II permit, as well as provide data that could be used to detect and prevent fluid movement out of the proposed injection zone.

- 1) Establish baseline production casing by surface casing annulus pressures prior to water injection in subject well with a calibrated gauge.
- 2) Record the baseline pressure, report findings to Newfield engineering group and keep on file so it is available upon request
- 3) Place injection well in service. Run packer integrity and radioactive tracer logs to verify wellbore integrity and determine zones taking water.
- 4) Construct a geologic cross section showing zones taking water and their geologic equivalent zones in the AOR wells.
- 5) Submit a report of the packer integrity log, radioactive tracer log, and geologic cross section to the Newfield engineering staff for review and keep on file so it is available upon request
- 6) Weekly observations of the site will be made by Newfield during normal well operating activities. Any surface discharge of fluids will be reported immediately.
- 7) After injection well is placed in service, weekly observations of annulus pressure will be made and compared to baseline pressure and will be recorded once monthly. The recorded pressure information will be kept on file and be available upon request.
- 8) If pressure increases by more than 10% above baseline at any time in an AOR well with insufficient cement bond, Newfield will run a temperature survey log in subject well. This log, in concert with the geologic cross section, will enable the determination of water movement in the open hole by production casing annulus through a shift in geothermal gradient.
- 9) If water movement is determined in annulus, Newfield will shut in the injection well and repair the production casing by open hole annulus or leave the injection well out of service.



# **STATEMENT OF BASIS**

**NEWFIELD PRODUCTION COMPANY  
BLACKJACK FEDERAL 13-10-9-17  
DUCHESNE COUNTY, UT**

**EPA PERMIT NO. UT21226-08345**

***CONTACT:*** Emmett Schmitz  
U. S. Environmental Protection Agency  
Ground Water Program, 8P-W-GW  
1595 Wynkoop Street  
Denver, Colorado 80202-1129  
Telephone: 1-800-227-8917 ext. 312-6174

This STATEMENT OF BASIS gives the derivation of site-specific UIC Permit conditions and reasons for them. Referenced sections and conditions correspond to sections and conditions in the Permit.

EPA UIC permits regulate the injection of fluids into underground injection wells so that the injection does not endanger underground sources of drinking water. EPA UIC permit conditions are based upon the authorities set forth in regulatory provisions at 40 CFR Parts 144 and 146, and address potential impacts to underground sources of drinking water. Under 40 CFR 144.35 Issuance of this permit does not convey any property rights of any sort or any exclusive privilege, nor authorize injury to persons or property of invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. Under 40 CFR 144 Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General Permit conditions for which the content is mandatory and not subject to site-specific differences (40 CFR Parts 144, 146 and 147) are not discussed in this document.

Upon the Effective Date when issued, the Permit authorizes the construction and operation of injection wells so that the injection does not endanger underground sources of drinking water, governed by the conditions specified in the Permit. The Permit is issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR 144.39, 144.40 and 144.41. The Permit is subject to EPA review at least once every five (5) years to determine if action is required under 40 CFR 144.36(a).

## PART I. General Information and Description of Facility

Newfield Production Company  
1001 Seventeenth Street, Suite 2000  
Denver, CO 80202

on

January 7, 2009

submitted an application for an Underground Injection Control (UIC) Program Permit or Permit Modification for the following injection well or wells:

Blackjack Federal 13-10-9-17  
308' FSL & 692' FWL, SWSW S10, T9S, R17E  
Duchesne County, UT

Regulations specific to Uintah-Ouray Indian Reservation injection wells are found at 40 CFR 147 Subpart TT.

The application, including the required information and data necessary to issue or modify a UIC Permit in accordance with 40 CFR Parts 144, 146 and 147, was reviewed and determined by EPA to be complete.

The Permit will expire upon delegation of primary enforcement responsibility (primacy) for applicable portions of the UIC Program to the Ute Indian Tribe or the State of Utah unless the delegated agency has the authority and chooses to adopt and enforce this Permit as a Tribal or State Permit.

TABLE 1.1 shows the status of the well or wells as "New", "Existing", or "Conversion" and for Existing shows the original date of injection operation. Well authorization "by rule" under 40 CFR Part 144 Subpart C expires automatically on the Effective Date of an issued UIC Permit.

Blackjack Federal No. 13-10-9-17 is currently an active Green River Formation Douglas Creek Member oil well. It is the initial intent of the applicant to initially use current Douglas Creek Member production perforations for Class II enhanced recovery injection. Total depth in Basal Carbonate.

**TABLE 1.1**  
**WELL STATUS / DATE OF OPERATION**

NEW WELLS		
Well Name	Well Status	Date of Operation
Blackjack Federal 13-10-9-17	New	N/A

## PART II. Permit Considerations (40 CFR 146.24)

### Hydrogeologic Setting

Water wells for domestic supply in this area, when present, generally are completed into the shallow alluvium, the Duchesne River Formation, or the underlying Uinta Formation, and the water generally contains approximately 500 to 1,500 mg/l and higher total dissolved solids.

The Uinta-Animas aquifer in the Uinta Basin is present in water-yielding beds of sandstone, conglomerate, and siltstone of the Duchesne River and Uinta Formations, the Renegade Tongue of the Wasatch Formation, and the Douglas Creek Member of the Green River Formation. The Renegade Tongue of the Wasatch Formation and the Douglas Creek Member of the Green River Formation contain an aquifer along the southern and eastern margins of the basin where the rocks primarily consist of fluvial, massive, irregularly bedded sandstone and siltstone. Water-yielding units in the Uinta-Animas aquifer in the Uinta Basin commonly are separated from each other and from the underlying Mesaverde aquifer by units of low permeability composed of claystone, shale, marlstone, or limestone. In the Uinta Basin, for example, the part of the aquifer in the Duchesne River and Uinta Formations ranges in thickness from 0 feet at the southern margin of the aquifer to as much as 9,000 feet in the north-central part of the aquifer. Ground-water recharge to the Uinta-Animas aquifer generally occurs in the areas of higher altitude along the margins of the basin. Ground water is discharged mainly to streams, springs, and by transpiration from vegetation growing along stream valleys. The rate of ground-water withdrawal is small, and natural discharge is approximately equal to recharge. Recharge occurs near the southern margin of the aquifer, and discharge occurs near the White and Green Rivers (from USGS publication HA 730-C). Water samples from Mesaverde sands in the nearby Natural Buttes Unit yielded highly saline water.

### Geologic Setting (TABLE 2.1)

The proposed enhanced oil recovery injection well is located in the Greater Monument Butte Field, T7-9S and R15-19E, which lies near the center of the broad, gently northward dipping south flank of the Uinta Basin. More than 450 million barrels of oil (63 MT) have been produced from sediments of the Uinta Basin. The Uinta Basin is a topographic and structural trough encompassing an area of more than 9300 square mi (14,900 km) in northeast Utah. The basin is sharply asymmetrical, with a steep north flank bounded by the east-west-trending Uinta Mountains, and a gently dipping south flank. The Uinta Basin was formed in Paleocene to Eocene time, creating a large area of internal drainage which was filled by the ancestral Lake Uinta. The lacustrine, or fresh water lake-formed, sediments deposited in and around Lake Uinta make up the Uintah and Green River Formations. The southern shore of Lake Uinta was very broad and flat, resulting in large cyclic shifts of the location of the shoreline during the many repeated transgressive and regressive cycles caused by the climatic and tectonic-induced rise and fall of water levels of the lake. Distributary-mouth bars, distributary channels, and near-shore bars are the primary oil producing sandstone reservoirs in the area. (Ref: "Reservoir Characterization of the Lower Green River Formation, Southwest Uinta Basin, Utah Biannual Technical Progress Report, 4/1/99-9/30/99", by C. D. Morgan, Program Manager, November 1999, Contract DE-AC26-98BC15103).

The Duchesne River Formation is absent in this area. Shale and siltstone of the Uintah Formation outcrop and compose the surface rock throughout the area. The lower 600 feet to 800 feet of the Uinta Formation, consisting generally of shale interbedded with occasionally water-bearing sandstone lenses between 5 feet to 20 feet thick, is underlain by the Green River Formation. The

Green River Formation is further subdivided into several Member and local marker units. The cyclic nature of Green River deposition in the southern shore area resulted in numerous stacked, intertonguing deltaic and near-shore sand and silt deposits. Red alluvial shale and siltstone deposits that intertongue with the Green River sediments are of the Colton and Wasatch Formations. Under the Wasatch Formation is the Mesaverde Formation, which consists primarily of continental-origin deposits of interbedded shale, sandstone, and coal.

The geologic dip is about 200 feet per mile, and there are no known surface faults in this area. Veins of gilsonite, a natural resinous hydrocarbon occasionally mined as a resource, occurs in the greater Uintah Basin though it is predominantly found on the eastern margin of the basin near the Colorado border. Vertical veins, generally between 2 ft to 6 ft wide but up to 28 ft wide, may extend many miles in length and occasionally extend as deep as 2000 ft. In this area within the Greater Monument Butte Field there is one known gilsonite vein. This vein is not considered to present a pathway for migration of fluid out of the injection zone because it terminates at depth of about 2000 ft, far above the protective confining layer and much deeper injection zone.

**TABLE 2.1**  
**GEOLOGIC SETTING**  
**Blackjack Federal 13-10-9-17**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Lithology
Uinta: Public. 92	0	225	< 10,000	Sand and shale.
Uinta	225	1,280		Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale.
Green River	1,280	5,829		Interbedded lacustrine sand, shale, evaporite and carbonate with fluvial sand and shale.
Green River: Trona	2,684	2,730		Evaporite.
Green River: Mahogany Bench	2,730	2,746		Shale.
Green River: Garden Gulch Member	3,496	4,462		Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale.
Green River: Douglas Creek Member	4,462	5,704	9,952	Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale.
Green River: Basal Carbonate Member	5,704	5,829		Carbonate.

#### **Proposed Injection Zone(s) (TABLE 2.2)**

An injection zone is a geological formation, group of formations, or part of a formation that receives fluids through a well. The proposed injection zones are listed in TABLE 2.2.

Injection will occur into an injection zone that is separated from USDWs by a confining zone which is free of known open faults or fractures within the Area of Review.

The approved interval for Class II enhanced recovery injection is located between the top of the Garden Gulch Member (3,496 feet) and the top of the Wasatch Formation estimated at 5,829 feet.

**TABLE 2.2**  
**INJECTION ZONES**  
**Blackjack Federal 13-10-9-17**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Fracture Gradient (psi/ft)	Porosity	Exempted?*
Green River	3,496	5,829		0.720		P

\* C - Currently Exempted  
E - Previously Exempted  
P - Proposed Exemption  
N/A - Not Applicable

**Confining Zone(s) (TABLE 2.3)**

A confining zone is a geological formation, part of a formation, or a group of formations that limits fluid movement above the injection zone. The confining zone or zones are listed in TABLE 2.3.

The 203-foot (3293 feet - 3,496 feet) shale Confining Zone directly overlies the top of the Garden Gulch Member.

**TABLE 2.3**  
**CONFINING ZONES**  
**Blackjack Federal 13-10-9-17**

Formation Name	Formation Lithology	Top (ft)	Base (ft)
Green River	Shale	3,293	3,496

**Underground Sources of Drinking Water (USDWs) (TABLE 2.4)**

Aquifers or the portions thereof which contain less than 10,000 mg/l total dissolved solids (TDS) and are being or could in the future be used as a source of drinking water are considered to be USDWs. The USDWs in the area of this facility are identified in TABLE 2.4.

Throughout the Greater Monument Butte Field area undergoing enhanced oil recovery operations, water analyses of the Green River Formation generally exhibit total dissolved solids (TDS) content well in excess of 10,000 mg/l. However, some recent water analyses from the field showed lower TDS values closer to 10,000 mg/l. While rain and surface water recharge into Green River Formation outcrops further south along the Book Cliffs/Roan Cliffs in effect "freshens" the Green River Formation water near those outcrops, in this area of the Monument Butte Field the observed occasional 'freshening' is ascribed to the effective dilution of the originally in-place high TDS water from injection of relatively fresh water for enhanced oil recovery operations. Water samples from deeper Mesaverde Formation sands in the nearby Natural Buttes Unit yield highly saline water.

The State of Utah "Water Wells and Springs" identifies no public water supply wells within the one-quarter (1/4) mile Area-of-Review (AOR) around Blackjack Federal No. 13-10-9-17.

Technical Publication No. 92: State of Utah, Department of Natural Resources, cites the base of Underground Sources of Drinking Water (USDW) in the Uinta Formation approximately 225 feet from the surface. Absent definitive information relative to the water quality of the Uinta Formation, 225 feet to the base of the Uinta Formation (1,280 feet), EPA will require during plugging and abandonment a cement plug at the base of the Uinta Formation to protect contamination of possible Uinta USDWs.

**TABLE 2.4**  
**UNDERGROUND SOURCES OF DRINKING WATER (USDW)**  
**Blackjack Federal 13-10-9-17**

Formation Name	Formation Lithology	Top (ft)	Base (ft)	TDS (mg/l)
Uinta: Public. 92	Sand and shale.	0	225	< 10,000
Uinta	Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale.	225	1,280	

**Exempted Aquifer(s) (40 CFR 144.7 and 146.4)**

Aquifers exempted from protection as a USDW are listed in TABLE 2.5. Exempted is that portion of the aquifer between the depths listed ("TOP" and "BASE") and within the Exempted Radius of the well's surface location, or for an Area Permit, one-quarter (1/4) mile exterior to the defined Area Permit boundary. "Criteria" corresponds to the appropriate criteria (below) for exemption. "VOLUME" is the maximum volume of fluid which can be injected into the exempted area before the injected fluids exceed the exemption boundary, calculated using the following formula:

$$V = \text{Pi} * \text{radius}^2 * \text{height} * \text{porosity} / 5.615$$

where V = VOLUME (in barrels)

Pi = 3.1416

radius<sup>2</sup> = Exempted Radius (squared) - generally 1/4 mile

height = height of reservoir ("BOTTOM" - "TOP")

porosity = reservoir porosity (in percent)

5.615 = conversion factor (cubic feet per barrel)

**TABLE 2.5**  
**AQUIFER EXEMPTION**  
**Blackjack Federal 13-10-9-17**

Formation Name	Top (ft)	Base (ft)	Criteria	Volume (bbl)
Green River	3,496	5,829	b(1)	

**An aquifer or a portion thereof may be determined to be an "exempted aquifer" provided it meets criteria, listed below.**

- a It does not currently serve as a source of drinking water; AND

- b(1) It cannot now and will not in the future serve as a source of drinking water because it is mineral, hydrocarbon, or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible; OR
- b(2) It cannot now and will not in the future serve as a source of drinking water because it is situated at a depth or location which makes recovery of water for drinking water purposes economically or technically impractical; OR
- b(3) It cannot now and will not in the future serve as a source of drinking water because it is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; OR
- b(4) It cannot now and will not in the future serve as a source of drinking water because it is located over a Class III well mining area subject to subsidence or catastrophic collapse; OR
- c The total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system.

### **PART III. Well Construction (40 CFR 146.22)**

Blackjack Federal No. 13-10-9-17 was drilled to a total depth of 5,725 feet (KB) feet in the Basal Carbonate Member. Plug back total depth (PBSD) is 5,670 feet.

Surface casing (8-5/8 inch) was set at a depth of 301 feet in a 12-1/4 inch hole using 150 sacks of Class "G" cement which was circulated to the surface.

Production casing (5-1/2 inch) was set at a depth of 5,714 feet (KB) in a 7-7/8 inch hole with 350 sacks of Premium Lite II mixed and 450 sacks of 50/50 Pozmix. Top of cement by Cement Bond Log is 140 feet from surface.

CBL analysis does identify adequate 80% bond index cement bond within the Confining Zone.

The schematic diagram shows enhanced recovery injection perforations in the Douglas Creek Member of the Green River Formation. Additional perforations may be added at a later time between the depths of 3,496 feet (top of Garden Gulch Member) and the estimated top of the Wasatch Formation (5,829 feet) provided the operator first notifies the Director and later submits an updated well completion report (EPA Form 7520-12) and schematic diagram.

The packer will be set no higher than 100 feet above the top perforation.



**TABLE 3.1**  
**WELL CONSTRUCTION REQUIREMENTS**  
**Blackjack Federal 13-10-9-17**

Casing Type	Hole Size (in)	Casing Size (in)	Cased Interval (ft)	Cemented Interval (ft)
Production	7.88	5.50	0 - 5,714	140 - 5,725
Surface	12.25	8.63	0 - 301	0 - 301

The approved well completion plan will be incorporated into the Permit as APPENDIX A and will be binding on the Permittee. Modification of the approved plan is allowed under 40 CFR 144.52(a)(1) provided written approval is obtained from the Director prior to actual modification.

#### **Casing and Cementing (TABLE 3.1)**

The well construction plan was evaluated and determined to be in conformance with standard practices and guidelines that ensure well injection does not result in the movement of fluids into USDWs. Well construction details for this "new" injection well is shown in TABLE 3.1.

Remedial cementing may be required if the casing cement is shown to be inadequate by cement bond log or other demonstration of Part II (External) mechanical integrity.

#### **Tubing and Packer**

Injection tubing is required to be installed from a packer up to the surface inside the well casing. The packer will be set above the uppermost perforation. The tubing and packer are designed to prevent injection fluid from coming into contact with the outermost casing.

#### **Tubing-Casing Annulus (TCA)**

The TCA allows the casing, tubing and packer to be pressure-tested periodically for mechanical integrity, and will allow for detection of leaks. The TCA will be filled with fresh water treated with a corrosion inhibitor or other fluid approved by the Director.

The tubing/casing annulus must be kept closed at all times so that it can be monitored as required under conditions of the Permit.

#### **Monitoring Devices**

The permittee will be required to install and maintain wellhead equipment that allows for monitoring pressures and providing access for sampling the injected fluid. Required equipment may include but is not limited to: 1) shut-off valves located at the wellhead on the injection tubing and on the TCA; 2) a flow meter that measures the cumulative volume of injected fluid; 3) fittings or pressure gauges attached to the injection tubing and the TCA for monitoring the injection and TCA pressure; and 4) a tap on the injection line, isolated by shut-off valves, for sampling the injected fluid.

All sampling and measurement taken for monitoring must be representative of the monitored activity.

## PART IV. Area of Review, Corrective Action Plan (40 CFR 144.55)

**TABLE 4.1**  
**AOR AND CORRECTIVE ACTION**

Well Name	Type	Status (Abandoned Y/N)	Total Depth (ft)	TOC Depth (ft)	CAP Required (Y/N)
Blackjack Federal No. Q-10-9-17	Producer	No	5,990	58	No
Castle Draw No. 14-10-9-17	Injector	No	6,097	0	No
South Pleasant Valley No. 4-15-9-17	Producer	No	5,500	250	Yes

TABLE 4.1 lists the wells in the Area of Review ("AOR") and shows the well type, operating status, depth, top of casing cement ("TOC") and whether a Corrective Action Plan ("CAP") is required for the well.

### Area Of Review

Applicants for Class I, II (other than "existing" wells) or III injection well Permits are required to identify the location of all known wells within the injection well's Area of Review (AOR) which penetrate the injection zone, or in the case of Class II wells operating over the fracture pressure of the formation, all known wells within the area of review that penetrate formations which may be affected by increased pressure. Under 40 CFR 146.6 the AOR may be a fixed radius of not less than one quarter (1/4) mile or a calculated zone of endangering influence. For Area Permits, a fixed width of not less than one quarter (1/4) mile for the circumscribing area may be used.

### Corrective Action Plan

For wells in the AOR which are improperly sealed, completed, or abandoned, the applicant shall develop a Corrective Action Plan (CAP) consisting of the steps or modifications that are necessary to prevent movement of fluid into USDWs.

The CAP will be incorporated into the Permit as APPENDIX F and become binding on the permittee.

## PART V. Well Operation Requirements (40 CFR 146.23)

**TABLE 5.1**  
**INJECTION ZONE PRESSURES**  
**Blackjack Federal 13-10-9-17**

Formation Name	Depth Used to Calculate MAIP (ft)	Fracture Gradient (psi/ft)	Initial MAIP (psi)
Green River	4,700	0.720	1,315

### Approved Injection Fluid

The approved injection fluid is limited to Class II injection well fluids pursuant to 40 CFR § 144.6(b). For disposal wells injecting water brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production, the fluid may be commingled and the well used to inject other Class II wastes such as drilling fluids and spent well completion, treatment and stimulation fluid. Injection of non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes, and vacuum truck and drum rinsate from trucks and drums transporting or containing non-exempt waste, is prohibited.

The proposed injectate will be a blend of culinary-quality water from the Johnson Water District pipeline and/or Green River pipeline, and produced Green River Formation water from wells proximate to the Blackjack Federal No. 13-10-9-17.

### Injection Pressure Limitation

Injection pressure, measured at the wellhead, shall not exceed a maximum calculated to assure that the pressure used during injection does not initiate new fractures or propagate existing fractures in the confining zones adjacent to the USDWs.

The applicant submitted injection fluid density and injection zone data which was used to calculate a formation fracture pressure and to determine the maximum allowable injection pressure (MAIP), as measured at the surface, for this Permit.

TABLE 5.1 lists the fracture gradient for the injection zone and the approved MAIP, determined according to the following formula:

$$FP = [fg - (0.433 * sg)] * d$$

FP = formation fracture pressure (measured at surface)  
fg = fracture gradient (from submitted data or tests)  
sg = specific gravity (of injected fluid)  
d = depth to top of injection zone (or top perforation)

### Injection Volume Limitation

Cumulative injected fluid volume limits are set to assure that injected fluids remain within the boundary of the exempted area. Cumulative injected fluid volume is limited when injection occurs into an aquifer that has been exempted from protection as a USDW.

There will be no restrictions on the cumulative volume or daily volume of authorized Class II fluid injected into the approved Green River interval. The Permittee will not exceed the authorized maximum surface injection pressure.

### Mechanical Integrity (40 CFR 146.8)

An injection well has mechanical integrity if:

1. there is no significant leak in the casing, tubing, or packer (Part I); and
2. there is no significant fluid movement into a USDW through vertical channels adjacent to the injection well bore (Part II).

The Permit prohibits injection into a well which lacks mechanical integrity.

The Permit requires that the well demonstrate mechanical integrity prior to injection and periodically thereafter. A demonstration of mechanical integrity includes both internal (Part I) and external (Part II). The methods and frequency for demonstrating Part I and Part II mechanical integrity are dependent upon well-specific conditions as explained below.

## **PART VI. Monitoring, Recordkeeping and Reporting Requirements**

### **Injection Well Monitoring Program**

At least once a year the permittee must analyze a sample of the injected fluid for total dissolved solids (TDS), specific conductivity, pH, and specific gravity. This analysis shall be reported to EPA annually as part of the Annual Report to the Director. Any time a new source of injected fluid is added, a fluid analysis shall be made of the new source.

Instantaneous injection pressure, injection flow rate, cumulative fluid volume and TCA pressures must be observed on a weekly basis. A recording, at least once every thirty (30) days, must be made of the injection pressure, annulus pressure, monthly injection flow rate and cumulative fluid volume. This information is required to be reported annually as part of the Annual Report to the Director.

## **PART VII. Plugging and Abandonment Requirements (40 CFR 146.10)**

### **Plugging and Abandonment Plan**

Prior to abandonment, the well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs, and in accordance with any applicable Federal, State or local law or regulation. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. Within sixty (60) days after plugging the owner or operator shall submit Plugging Record (EPA Form 7520 13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. The plugging and abandonment plan is described in Appendix E of the Permit.

The well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs and in accordance with other applicable Federal, State or local law or regulation. Tubing, packers, and any downhole apparatus shall be removed. Class A, C, G, and H cements, with additives such as accelerators and retarders that control or enhance cement properties, may be used for plugs. However, volume extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. Within sixty (60) days after plugging, the owner or operator shall submit Plugging Record (EPA Form 7520-13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. At a minimum, the following plugs are required:

**PLUG NO. 1: Seal Injection Zone:** Set a cast iron bridge plug (CIBP) no more than fifty (50) feet above the top injection perforation. Place at least twenty (20) feet of cement plug on top of the CIBP.

**PLUG NO. 2: Seal Mahogany Shale and Trona intervals:** Squeeze a cement plug on the backside of the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale approximately 2,635 feet to 2,800 feet (unless pre-existing backside cement precludes cement-squeezing this interval) followed by a minimum 165-foot balanced cement plug inside the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale, approximately 2,635 feet to 2,800 feet.

**PLUG NO. 3: Seal USDWs:** Squeeze a cement plug (1,220 feet - 1,340 feet) on the backside of the 5-1/2 inch casing across the base of the Uinta formation (unless pre-existing backside cement precludes cement-squeezing this interval), followed by a minimum 120-foot balanced 1,220 feet to 1,340 feet.

**PLUG NO.4: Seal Surface:** Set a Class "G" cement plug within the 5-1/2 inch casing to 351 feet and up the 5-1/2 inch by 8-5/8 inch casings annulus to the surface.

## **PART VIII. Financial Responsibility (40 CFR 144.52)**

### **Demonstration of Financial Responsibility**

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director. The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance such as financial statements or other materials acceptable to the Director. The Regional Administrator may, on a periodic basis, require the holder of a lifetime permit to submit a revised estimate of the resources needed to plug and abandon the well to reflect inflation of such costs, and a revised demonstration of financial responsibility if necessary. Initially, the operator has chosen to demonstrate financial responsibility with:

An April 24, 2009 demonstration of Financial Responsibility in the amount of \$59,344 has been provided.

The Director may revise the amount required, and may require the Permittee to obtain and provide updated estimates of plugging and abandonment costs to the approved Plugging and Abandonment Plan.

Financial Statement, received May 16, 2008

Evidence of continuing financial responsibility is required to be submitted to the Director annually.

# UNDERGROUND INJECTION CONTROL PROGRAM

## AQUIFER EXEMPTION

EPA PERMIT NO. UT21226-08345

Newfield Production Company

**TABLE 1.1**  
**AQUIFER EXEMPTION PROPOSAL(S)**  
**Blackjack Federal 13-10-9-17**


Formation Name	Top (ft)	Base (ft)	TDS (mg/l)
Green River	3,496.00	5,829.00	

The formation listed above is hereby exempted from protection as an underground source of drinking water (USDW) in compliance with provisions of the Safe Drinking Water Act as amended (42 USC 300f-300j-9, commonly known as the SDWA) and attendant regulations at Title 40 of the Code of Federal Regulations, within the subsurface interval shown and within a 1/4 mile radial distance from the surface location of the:

Blackjack Federal 13-10-9-17  
Monument Butte (Duchesne)  
308' FSL & 692' FWL, SWSW S10, T9S, R17E  
Duchesne County, UT

This aquifer exemption is granted in conjunction with an Underground Injection Control Permit issued for the injection of Class II fluids. This Aquifer Exemption has no expiration date.

The effective date of this exemption is JUL 30 2009.



Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

# **STATEMENT OF BASIS**

**NEWFIELD PRODUCTION COMPANY  
BLACKJACK FEDERAL 13-10-9-17  
DUCHESNE COUNTY, UT**

**EPA PERMIT NO. UT21226-08345**

***CONTACT:*** Emmett Schmitz  
U. S. Environmental Protection Agency  
Ground Water Program, 8P-W-GW  
1595 Wynkoop Street  
Denver, Colorado 80202-1129  
Telephone: 1-800-227-8917 ext. 312-6174

This STATEMENT OF BASIS gives the derivation of site-specific UIC Permit conditions and reasons for them. Referenced sections and conditions correspond to sections and conditions in the Permit.

EPA UIC permits regulate the injection of fluids into underground injection wells so that the injection does not endanger underground sources of drinking water. EPA UIC permit conditions are based upon the authorities set forth in regulatory provisions at 40 CFR Parts 144 and 146, and address potential impacts to underground sources of drinking water. Under 40 CFR 144.35 issuance of this permit does not convey any property rights of any sort or any exclusive privilege, nor authorize injury to persons or property of invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. Under 40 CFR 144 Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General Permit conditions for which the content is mandatory and not subject to site-specific differences (40 CFR Parts 144, 146 and 147) are not discussed in this document.

Upon the Effective Date when issued, the Permit authorizes the construction and operation of injection wells so that the injection does not endanger underground sources of drinking water, governed by the conditions specified in the Permit. The Permit is issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR 144.39, 144.40 and 144.41. The Permit is subject to EPA review at least once every five (5) years to determine if action is required under 40 CFR 144.36(a).



## PART I. General Information and Description of Facility

Newfield Production Company  
1001 Seventeenth Street, Suite 2000  
Denver, CO 80202

on

January 7, 2009

submitted an application for an Underground Injection Control (UIC) Program Permit or Permit Modification for the following injection well or wells:

Blackjack Federal 13-10-9-17  
308' FSL & 692' FWL, SWSW S10, T9S, R17E  
Duchesne County, UT

Regulations specific to Uintah-Ouray Indian Reservation injection wells are found at 40 CFR 147 Subpart TT.

The application, including the required information and data necessary to issue or modify a UIC Permit in accordance with 40 CFR Parts 144, 146 and 147, was reviewed and determined by EPA to be complete.

The Permit will expire upon delegation of primary enforcement responsibility (primacy) for applicable portions of the UIC Program to the Ute Indian Tribe or the State of Utah unless the delegated agency has the authority and chooses to adopt and enforce this Permit as a Tribal or State Permit.

TABLE 1.1 shows the status of the well or wells as "New", "Existing", or "Conversion" and for Existing shows the original date of injection operation. Well authorization "by rule" under 40 CFR Part 144 Subpart C expires automatically on the Effective Date of an issued UIC Permit.

Blackjack Federal No. 13-10-9-17 is currently an active Green River Formation Douglas Creek Member oil well. It is the initial intent of the applicant to initially use current Douglas Creek Member production perforations for Class II enhanced recovery injection. Total depth in Basal Carbonate.

TABLE 1.1		
WELL STATUS / DATE OF OPERATION		
NEW WELLS		
Well Name	Well Status	Date of Operation
Blackjack Federal 13-10-9-17	New	N/A

## PART II. Permit Considerations (40 CFR 146.24)

### Hydrogeologic Setting

Water wells for domestic supply in this area, when present, generally are completed into the shallow alluvium, the Duchesne River Formation, or the underlying Uinta Formation, and the water generally contains approximately 500 to 1,500 mg/l and higher total dissolved solids.

The Uinta-Animas aquifer in the Uinta Basin is present in water-yielding beds of sandstone, conglomerate, and siltstone of the Duchesne River and Uinta Formations, the Renegade Tongue of the Wasatch Formation, and the Douglas Creek Member of the Green River Formation. The Renegade Tongue of the Wasatch Formation and the Douglas Creek Member of the Green River Formation contain an aquifer along the southern and eastern margins of the basin where the rocks primarily consist of fluvial, massive, irregularly bedded sandstone and siltstone. Water-yielding units in the Uinta-Animas aquifer in the Uinta Basin commonly are separated from each other and from the underlying Mesaverde aquifer by units of low permeability composed of claystone, shale, marlstone, or limestone. In the Uinta Basin, for example, the part of the aquifer in the Duchesne River and Uinta Formations ranges in thickness from 0 feet at the southern margin of the aquifer to as much as 9,000 feet in the north-central part of the aquifer. Ground-water recharge to the Uinta-Animas aquifer generally occurs in the areas of higher altitude along the margins of the basin. Ground water is discharged mainly to streams, springs, and by transpiration from vegetation growing along stream valleys. The rate of ground-water withdrawal is small, and natural discharge is approximately equal to recharge. Recharge occurs near the southern margin of the aquifer, and discharge occurs near the White and Green Rivers (from USGS publication HA 730-C). Water samples from Mesaverde sands in the nearby Natural Buttes Unit yielded highly saline water.

### Geologic Setting (TABLE 2.1)

The proposed enhanced oil recovery injection well is located in the Greater Monument Butte Field, T7-9S and R15-19E, which lies near the center of the broad, gently northward dipping south flank of the Uinta Basin. More than 450 million barrels of oil (63 MT) have been produced from sediments of the Uinta Basin. The Uinta Basin is a topographic and structural trough encompassing an area of more than 9300 square mi (14,900 km) in northeast Utah. The basin is sharply asymmetrical, with a steep north flank bounded by the east-west-trending Uinta Mountains, and a gently dipping south flank. The Uinta Basin was formed in Paleocene to Eocene time, creating a large area of internal drainage which was filled by the ancestral Lake Uinta. The lacustrine, or fresh water lake-formed, sediments deposited in and around Lake Uinta make up the Uintah and Green River Formations. The southern shore of Lake Uinta was very broad and flat, resulting in large cyclic shifts of the location of the shoreline during the many repeated transgressive and regressive cycles caused by the climatic and tectonic-induced rise and fall of water levels of the lake. Distributary-mouth bars, distributary channels, and near-shore bars are the primary oil producing sandstone reservoirs in the area. (Ref: "Reservoir Characterization of the Lower Green River Formation, Southwest Uinta Basin, Utah Biannual Technical Progress Report, 4/1/99-9/30/99", by C. D. Morgan, Program Manager, November 1999, Contract DE-AC26-98BC15103).

The Duchesne River Formation is absent in this area. Shale and siltstone of the Uintah Formation outcrop and compose the surface rock throughout the area. The lower 600 feet to 800 feet of the Uinta Formation, consisting generally of shale interbedded with occasionally water-bearing sandstone lenses between 5 feet to 20 feet thick, is underlain by the Green River Formation. The

Green River Formation is further subdivided into several Member and local marker units. The cyclic nature of Green River deposition in the southern shore area resulted in numerous stacked, intertonguing deltaic and near-shore sand and silt deposits. Red alluvial shale and siltstone deposits that intertongue with the Green River sediments are of the Colton and Wasatch Formations. Under the Wasatch Formation is the Mesaverde Formation, which consists primarily of continental-origin deposits of interbedded shale, sandstone, and coal.

The geologic dip is about 200 feet per mile, and there are no known surface faults in this area. Veins of gilsonite, a natural resinous hydrocarbon occasionally mined as a resource, occurs in the greater Uintah Basin though it is predominantly found on the eastern margin of the basin near the Colorado border. Vertical veins, generally between 2 ft to 6 ft wide but up to 28 ft wide, may extend many miles in length and occasionally extend as deep as 2000 ft. In this area within the Greater Monument Butte Field there is one known gilsonite vein. This vein is not considered to present a pathway for migration of fluid out of the injection zone because it terminates at depth of about 2000 ft, far above the protective confining layer and much deeper injection zone.

**TABLE 2.1**  
**GEOLOGIC SETTING**  
**Blackjack Federal 13-10-9-17**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Lithology
Uinta: Public. 92	0	225	< 10,000	Sand and shale.
Uinta	225	1,280		Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale.
Green River	1,280	5,829		Interbedded lacustrine sand, shale, evaporite and carbonate with fluvial sand and shale.
Green River: Trona	2,684	2,730		Evaporite.
Green River: Mahogany Bench	2,730	2,746		Shale.
Green River: Garden Gulch Member	3,496	4,462		Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale.
Green River: Douglas Creek Member	4,462	5,704	9,952	Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale.
Green River: Basal Carbonate Member	5,704	5,829		Carbonate.

#### **Proposed Injection Zone(s) (TABLE 2.2)**

An injection zone is a geological formation, group of formations, or part of a formation that receives fluids through a well. The proposed injection zones are listed in TABLE 2.2.

Injection will occur into an injection zone that is separated from USDWs by a confining zone which is free of known open faults or fractures within the Area of Review.

The approved interval for Class II enhanced recovery injection is located between the top of the Garden Gulch Member (3,496 feet) and the top of the Wasatch Formation estimated at 5,829 feet.

**TABLE 2.2**  
**INJECTION ZONES**  
**Blackjack Federal 13-10-9-17**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Fracture Gradient (psi/ft)	Porosity	Exempted?*
Green River	3,496	5,829		0.720		P

\* C - Currently Exempted  
E - Previously Exempted  
P - Proposed Exemption  
N/A - Not Applicable

**Confining Zone(s) (TABLE 2.3)**

A confining zone is a geological formation, part of a formation, or a group of formations that limits fluid movement above the injection zone. The confining zone or zones are listed in TABLE 2.3.

The 203-foot (3293 feet - 3,496 feet) shale Confining Zone directly overlies the top of the Garden Gulch Member.

**TABLE 2.3**  
**CONFINING ZONES**  
**Blackjack Federal 13-10-9-17**

Formation Name	Formation Lithology	Top (ft)	Base (ft)
Green River	Shale	3,293	3,496

**Underground Sources of Drinking Water (USDWs) (TABLE 2.4)**

Aquifers or the portions thereof which contain less than 10,000 mg/l total dissolved solids (TDS) and are being or could in the future be used as a source of drinking water are considered to be USDWs. The USDWs in the area of this facility are identified in TABLE 2.4.

Throughout the Greater Monument Butte Field area undergoing enhanced oil recovery operations, water analyses of the Green River Formation generally exhibit total dissolved solids (TDS) content well in excess of 10,000 mg/l. However, some recent water analyses from the field showed lower TDS values closer to 10,000 mg/l. While rain and surface water recharge into Green River Formation outcrops further south along the Book Cliffs/Roan Cliffs in effect "freshens" the Green River Formation water near those outcrops, in this area of the Monument Butte Field the observed occasional 'freshening' is ascribed to the effective dilution of the originally in-place high TDS water from injection of relatively fresh water for enhanced oil recovery operations. Water samples from deeper Mesaverde Formation sands in the nearby Natural Buttes Unit yield highly saline water.

The State of Utah "Water Wells and Springs" identifies no public water supply wells within the one-quarter (1/4) mile Area-of-Review (AOR) around Blackjack Federal No. 13-10-9-17.

Technical Publication No. 92: State of Utah, Department of Natural Resources, cites the base of Underground Sources of Drinking Water (USDW) in the Uinta Formation approximately 225 feet from the surface. Absent definitive information relative to the water quality of the Uinta Formation, 225 feet to the base of the Uinta Formation (1,280 feet), EPA will require during plugging and abandonment a cement plug at the base of the Uinta Formation to protect contamination of possible Uinta USDWs.

**TABLE 2.4**  
**UNDERGROUND SOURCES OF DRINKING WATER (USDW)**  
**Blackjack Federal 13-10-9-17**

Formation Name	Formation Lithology	Top (ft)	Base (ft)	TDS (mg/l)
Uinta: Public. 92	Sand and shale.	0	225	< 10,000
Uinta	Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale.	225	1,280	

**Exempted Aquifer(s) (40 CFR 144.7 and 146.4)**

Aquifers exempted from protection as a USDW are listed in TABLE 2.5. Exempted is that portion of the aquifer between the depths listed ("TOP" and "BASE") and within the Exempted Radius of the well's surface location, or for an Area Permit, one-quarter (1/4) mile exterior to the defined Area Permit boundary. "Criteria" corresponds to the appropriate criteria (below) for exemption. "VOLUME" is the maximum volume of fluid which can be injected into the exempted area before the injected fluids exceed the exemption boundary, calculated using the following formula:

$$V = \text{Pi} * \text{radius}^2 * \text{height} * \text{porosity} / 5.615$$

where V = VOLUME (in barrels)

Pi = 3.1416

radius<sup>2</sup> = Exempted Radius (squared) - generally 1/4 mile

height = height of reservoir ("BOTTOM" - "TOP")

porosity = reservoir porosity (in percent)

5.615 = conversion factor (cubic feet per barrel)

**TABLE 2.5**  
**AQUIFER EXEMPTION**  
**Blackjack Federal 13-10-9-17**

Formation Name	Top (ft)	Base (ft)	Criteria	Volume (bbl)
Green River	3,496	5,829	b(1)	

**An aquifer or a portion thereof may be determined to be an "exempted aquifer" provided it meets criteria, listed below.**

- a It does not currently serve as a source of drinking water; AND

- b(1) It cannot now and will not in the future serve as a source of drinking water because it is mineral, hydrocarbon, or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible; OR
- b(2) It cannot now and will not in the future serve as a source of drinking water because it is situated at a depth or location which makes recovery of water for drinking water purposes economically or technically impractical; OR
- b(3) It cannot now and will not in the future serve as a source of drinking water because it is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; OR
- b(4) It cannot now and will not in the future serve as a source of drinking water because it is located over a Class III well mining area subject to subsidence or catastrophic collapse; OR
- c The total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system.

### **PART III. Well Construction (40 CFR 146.22)**

Blackjack Federal No. 13-10-9-17 was drilled to a total depth of 5,725 feet (KB) feet in the Basal Carbonate Member. Plug back total depth (PBDT) is 5,670 feet.

Surface casing (8-5/8 inch) was set at a depth of 301 feet in a 12-1/4 inch hole using 150 sacks of Class "G" cement which was circulated to the surface.

Production casing (5-1/2 inch) was set at a depth of 5,714 feet (KB) in a 7-7/8 inch hole with 350 sacks of Premium Lite II mixed and 450 sacks of 50/50 Pozmix. Top of cement by Cement Bond Log is 140 feet from surface.

CBL analysis does identify adequate 80% bond index cement bond within the Confining Zone.

The schematic diagram shows enhanced recovery injection perforations in the Douglas Creek Member of the Green River Formation. Additional perforations may be added at a later time between the depths of 3,496 feet (top of Garden Gulch Member) and the estimated top of the Wasatch Formation (5,829 feet) provided the operator first notifies the Director and later submits an updated well completion report (EPA Form 7520-12) and schematic diagram.

The packer will be set no higher than 100 feet above the top perforation.

**TABLE 3.1**  
**WELL CONSTRUCTION REQUIREMENTS**  
**Blackjack Federal 13-10-9-17**

Casing Type	Hole Size (in)	Casing Size (in)	Cased Interval (ft)	Cemented Interval (ft)
Production	7.88	5.50	0 - 5,714	140 - 5,725
Surface	12.25	8.63	0 - 301	0 - 301

The approved well completion plan will be incorporated into the Permit as APPENDIX A and will be binding on the Permittee. Modification of the approved plan is allowed under 40 CFR 144.52(a)(1) provided written approval is obtained from the Director prior to actual modification.

#### **Casing and Cementing (TABLE 3.1)**

The well construction plan was evaluated and determined to be in conformance with standard practices and guidelines that ensure well injection does not result in the movement of fluids into USDWs. Well construction details for this "new" injection well is shown in TABLE 3.1.

Remedial cementing may be required if the casing cement is shown to be inadequate by cement bond log or other demonstration of Part II (External) mechanical integrity.

#### **Tubing and Packer**

Injection tubing is required to be installed from a packer up to the surface inside the well casing. The packer will be set above the uppermost perforation. The tubing and packer are designed to prevent injection fluid from coming into contact with the outermost casing.

#### **Tubing-Casing Annulus (TCA)**

The TCA allows the casing, tubing and packer to be pressure-tested periodically for mechanical integrity, and will allow for detection of leaks. The TCA will be filled with fresh water treated with a corrosion inhibitor or other fluid approved by the Director.

The tubing/casing annulus must be kept closed at all times so that it can be monitored as required under conditions of the Permit.

#### **Monitoring Devices**

The permittee will be required to install and maintain wellhead equipment that allows for monitoring pressures and providing access for sampling the injected fluid. Required equipment may include but is not limited to: 1) shut-off valves located at the wellhead on the injection tubing and on the TCA; 2) a flow meter that measures the cumulative volume of injected fluid; 3) fittings or pressure gauges attached to the injection tubing and the TCA for monitoring the injection and TCA pressure; and 4) a tap on the injection line, isolated by shut-off valves, for sampling the injected fluid.

All sampling and measurement taken for monitoring must be representative of the monitored activity.

## PART IV. Area of Review, Corrective Action Plan (40 CFR 144.55)

**TABLE 4.1**  
**AOR AND CORRECTIVE ACTION**

Well Name	Type	Status (Abandoned Y/N)	Total Depth (ft)	TOC Depth (ft)	CAP Required (Y/N)
Blackjack Federal No. Q-10-9-17	Producer	No	5,990	58	No
Castle Draw No. 14-10-9-17	Injector	No	6,097	0	No
South Pleasant Valley No. 4-15-9-17	Producer	No	5,500	250	Yes

TABLE 4.1 lists the wells in the Area of Review ("AOR") and shows the well type, operating status, depth, top of casing cement ("TOC") and whether a Corrective Action Plan ("CAP") is required for the well.

### Area Of Review

Applicants for Class I, II (other than "existing" wells) or III injection well Permits are required to identify the location of all known wells within the injection well's Area of Review (AOR) which penetrate the injection zone, or in the case of Class II wells operating over the fracture pressure of the formation, all known wells within the area of review that penetrate formations which may be affected by increased pressure. Under 40 CFR 146.6 the AOR may be a fixed radius of not less than one quarter (1/4) mile or a calculated zone of endangering influence. For Area Permits, a fixed width of not less than one quarter (1/4) mile for the circumscribing area may be used.

### Corrective Action Plan

For wells in the AOR which are improperly sealed, completed, or abandoned, the applicant shall develop a Corrective Action Plan (CAP) consisting of the steps or modifications that are necessary to prevent movement of fluid into USDWs.

The CAP will be incorporated into the Permit as APPENDIX F and become binding on the permittee.

## PART V. Well Operation Requirements (40 CFR 146.23)

**TABLE 5.1**  
**INJECTION ZONE PRESSURES**  
**Blackjack Federal 13-10-9-17**

Formation Name	Depth Used to Calculate MAIP (ft)	Fracture Gradient (psi/ft)	Initial MAIP (psi)
Green River	4,700	0.720	1,315



### Approved Injection Fluid

The approved injection fluid is limited to Class II injection well fluids pursuant to 40 CFR § 144.6(b). For disposal wells injecting water brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production, the fluid may be commingled and the well used to inject other Class II wastes such as drilling fluids and spent well completion, treatment and stimulation fluid. Injection of non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes, and vacuum truck and drum rinsate from trucks and drums transporting or containing non-exempt waste, is prohibited.

The proposed injectate will be a blend of culinary-quality water from the Johnson Water District pipeline and/or Green River pipeline, and produced Green River Formation water from wells proximate to the Blackjack Federal No. 13-10-9-17.

### Injection Pressure Limitation

Injection pressure, measured at the wellhead, shall not exceed a maximum calculated to assure that the pressure used during injection does not initiate new fractures or propagate existing fractures in the confining zones adjacent to the USDWs.

The applicant submitted injection fluid density and injection zone data which was used to calculate a formation fracture pressure and to determine the maximum allowable injection pressure (MAIP), as measured at the surface, for this Permit.

TABLE 5.1 lists the fracture gradient for the injection zone and the approved MAIP, determined according to the following formula:

$$FP = [fg - (0.433 * sg)] * d$$

FP = formation fracture pressure (measured at surface)  
fg = fracture gradient (from submitted data or tests)  
sg = specific gravity (of injected fluid)  
d = depth to top of injection zone (or top perforation)

### Injection Volume Limitation

Cumulative injected fluid volume limits are set to assure that injected fluids remain within the boundary of the exempted area. Cumulative injected fluid volume is limited when injection occurs into an aquifer that has been exempted from protection as a USDW.

There will be no restrictions on the cumulative volume or daily volume of authorized Class II fluid injected into the approved Green River interval. The Permittee will not exceed the authorized maximum surface injection pressure.

### Mechanical Integrity (40 CFR 146.8)

An injection well has mechanical integrity if:

1. there is no significant leak in the casing, tubing, or packer (Part I); and
2. there is no significant fluid movement into a USDW through vertical channels adjacent to the injection well bore (Part II).

The Permit prohibits injection into a well which lacks mechanical integrity.

The Permit requires that the well demonstrate mechanical integrity prior to injection and periodically thereafter. A demonstration of mechanical integrity includes both internal (Part I) and external (Part II). The methods and frequency for demonstrating Part I and Part II mechanical integrity are dependent upon well-specific conditions as explained below.

## **PART VI. Monitoring, Recordkeeping and Reporting Requirements**

### **Injection Well Monitoring Program**

At least once a year the permittee must analyze a sample of the injected fluid for total dissolved solids (TDS), specific conductivity, pH, and specific gravity. This analysis shall be reported to EPA annually as part of the Annual Report to the Director. Any time a new source of injected fluid is added, a fluid analysis shall be made of the new source.

Instantaneous injection pressure, injection flow rate, cumulative fluid volume and TCA pressures must be observed on a weekly basis. A recording, at least once every thirty (30) days, must be made of the injection pressure, annulus pressure, monthly injection flow rate and cumulative fluid volume. This information is required to be reported annually as part of the Annual Report to the Director.

## **PART VII. Plugging and Abandonment Requirements (40 CFR 146.10)**

### **Plugging and Abandonment Plan**

Prior to abandonment, the well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs, and in accordance with any applicable Federal, State or local law or regulation. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. Within sixty (60) days after plugging the owner or operator shall submit Plugging Record (EPA Form 7520-13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. The plugging and abandonment plan is described in Appendix E of the Permit.

The well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs and in accordance with other applicable Federal, State or local law or regulation. Tubing, packers, and any downhole apparatus shall be removed. Class A, C, G, and H cements, with additives such as accelerators and retarders that control or enhance cement properties, may be used for plugs. However, volume extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. Within sixty (60) days after plugging, the owner or operator shall submit Plugging Record (EPA Form 7520-13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. At a minimum, the following plugs are required:

**PLUG NO. 1:** Seal Injection Zone: Set a cast iron bridge plug (CIBP) no more than fifty (50) feet above the top injection perforation. Place at least twenty (20) feet of cement plug on top of the CIBP.

**PLUG NO. 2: Seal Mahogany Shale and Trona intervals:** Squeeze a cement plug on the backside of the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale approximately 2,635 feet to 2,800 feet (unless pre-existing backside cement precludes cement-squeezing this interval) followed by a minimum 165-foot balanced cement plug inside the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale, approximately 2,635 feet to 2,800 feet.

**PLUG NO. 3: Seal USDWs:** Squeeze a cement plug (1,220 feet - 1,340 feet) on the backside of the 5-1/2 inch casing across the base of the Uinta formation (unless pre-existing backside cement precludes cement-squeezing this interval), followed by a minimum 120-foot balanced 1,220 feet to 1,340 feet.

**PLUG NO.4: Seal Surface:** Set a Class "G" cement plug within the 5-1/2 inch casing to 351 feet and up the 5-1/2 inch by 8-5/8 inch casings annulus to the surface.

## **PART VIII. Financial Responsibility (40 CFR 144.52)**

### **Demonstration of Financial Responsibility**

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director. The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance such as financial statements or other materials acceptable to the Director. The Regional Administrator may, on a periodic basis, require the holder of a lifetime permit to submit a revised estimate of the resources needed to plug and abandon the well to reflect inflation of such costs, and a revised demonstration of financial responsibility if necessary. Initially, the operator has chosen to demonstrate financial responsibility with:

An April 24, 2009 demonstration of Financial Responsibility in the amount of \$59,344 has been provided.

The Director may revise the amount required, and may require the Permittee to obtain and provide updated estimates of plugging and abandonment costs to the approved Plugging and Abandonment Plan.

Financial Statement, received May 16, 2008

Evidence of continuing financial responsibility is required to be submitted to the Director annually.

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER		5. LEASE DESIGNATION AND SERIAL NUMBER: USA UTU-70821
2. NAME OF OPERATOR: NEWFIELD PRODUCTION COMPANY		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: Route 3 Box 3630 CITY Myton STATE UT ZIP 84052		7. UNIT or CA AGREEMENT NAME: GMBU
4. LOCATION OF WELL: FOOTAGES AT SURFACE: 308 FSL 692 FWL		8. WELL NAME and NUMBER: BLACKJACK FEDERAL 13-10-9-17
OTR/OTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWSW, 10, T9S, R17E		9. API NUMBER: 4301332504
		10. FIELD AND POOL, OR WILDCAT: MONUMENT BUTTE
		COUNTY: DUCHESNE
		STATE: UT

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of Work Completion: 04/08/2010	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input checked="" type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/STOP)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: -
	<input checked="" type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The subject well has been converted from a producing oil well to an injection well on 04/01/2010.

On 03/29/2010 Jason Deardorff with the EPA was contacted concerning the initial MIT on the above listed well. On 04/08/2010 the casing was pressured up to 1450 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tubing pressure was 400 psig during the test. There was not an EPA representative available to witness the test.

EPA# UT21226-08345 API# 43-013-32504

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY

NAME (PLEASE PRINT) Lucy Chavez-Naupoto TITLE Administrative Assistant  
SIGNATURE  DATE 04/12/2010

(This space for State use only)

RECEIVED  
APR 15 2010  
DIV. OF OIL, GAS & MINING

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**SUBMIT IN TRIPLICATE - Other Instructions on page 2**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

NEWFIELD PRODUCTION COMPANY

3a. Address Route 3 Box 3630

Myton, UT 84052

3b. Phone (include area code)

435.646.3721

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

308 FSL 692 FWL

SWSW Section 10 T9S R17E

5. Lease Serial No.

USA UTU-70821

6. If Indian, Allottee or Tribe Name.

7. If Unit or CA/Agreement, Name and/or

GMBU

8. Well Name and No.

BLACKJACK FEDERAL 13-10-9-17

9. API Well No.

4301332504

10. Field and Pool, or Exploratory Area

MONUMENT BUTTE

11. County or Parish, State

DUCHESNE, UT

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug & Abandon	<input type="checkbox"/> Temporarily Abandon	Change Status _____
	<input checked="" type="checkbox"/> Convert to Injector	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: (Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

The subject well has been converted from a producing oil well to an injection well on 04/01/2010.

On 03/29/2010 Jason Deardorff with the EPA was contacted concerning the initial MIT on the above listed well. On 04/08/2010 the casing was pressured up to 1450 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tubing pressure was 400 psig during the test. There was not an EPA representative available to witness the test.

EPA# UT21226-08345

API# 43-013-32504

I hereby certify that the foregoing is true and correct (Printed/ Typed)

Lucy Chavez-Naupoto

Signature

Title

Administrative Assistant

Date

04/12/2010

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious and fraudulent statements or representations as to any matter within its jurisdiction

(Instructions on page 2)

**RECEIVED**  
**APR 15 2010**

DIV. OF OIL GAS & MINERAL

# Mechanical Integrity Test

## Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency  
Underground Injection Control Program  
999 18<sup>th</sup> Street, Suite 500 Denver, CO 80202-2466

EPA Witness: \_\_\_\_\_ Date: 4 / 8 / 2010  
Test conducted by: James Bird  
Others present: Cole Harris

Well Name: <u>Black Jack Federal 13-10-9-17</u>		Type: <u>ER SWD</u>	Status: <u>AC TA UC</u>
Field: <u>Monument Butte</u>			
Location: <u>S/W S/W</u> Sec: <u>10</u> T <u>9</u> N <u>10</u> R <u>17</u> <u>10</u> W		County: <u>Duchesne</u>	State: <u>UT</u>
Operator: <u>Newfield</u>			
Last MIT: _____ / _____ / _____		Maximum Allowable Pressure: _____	PSIG

Is this a regularly scheduled test?    ☐ Yes    ☒ No  
Initial test for permit?    ☒ Yes    ☐ No  
Test after well rework?    ☐ Yes    ☒ No  
Well injecting during test?    ☐ Yes    ☒ No    If Yes, rate: \_\_\_\_\_ bpd

Pre-test casing/tubing annulus pressure: \_\_\_\_\_ 0 psig

MIT DATA TABLE	Test #1	Test #2	Test #3
<b>TUBING PRESSURE</b>			
Initial Pressure	<u>400</u> psig	psig	psig
End of test pressure	<u>400</u> psig	psig	psig
<b>CASING / TUBING ANNULUS PRESSURE</b>			
0 minutes	<u>1450</u> psig	psig	psig
5 minutes	<u>1450</u> psig	psig	psig
10 minutes	<u>1450</u> psig	psig	psig
15 minutes	<u>1450</u> psig	psig	psig
20 minutes	<u>1450</u> psig	psig	psig
25 minutes	<u>1450</u> psig	psig	psig
30 minutes	<u>1450</u> psig	psig	psig
_____ minutes	psig	psig	psig
_____ minutes	psig	psig	psig
<b>RESULT</b>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

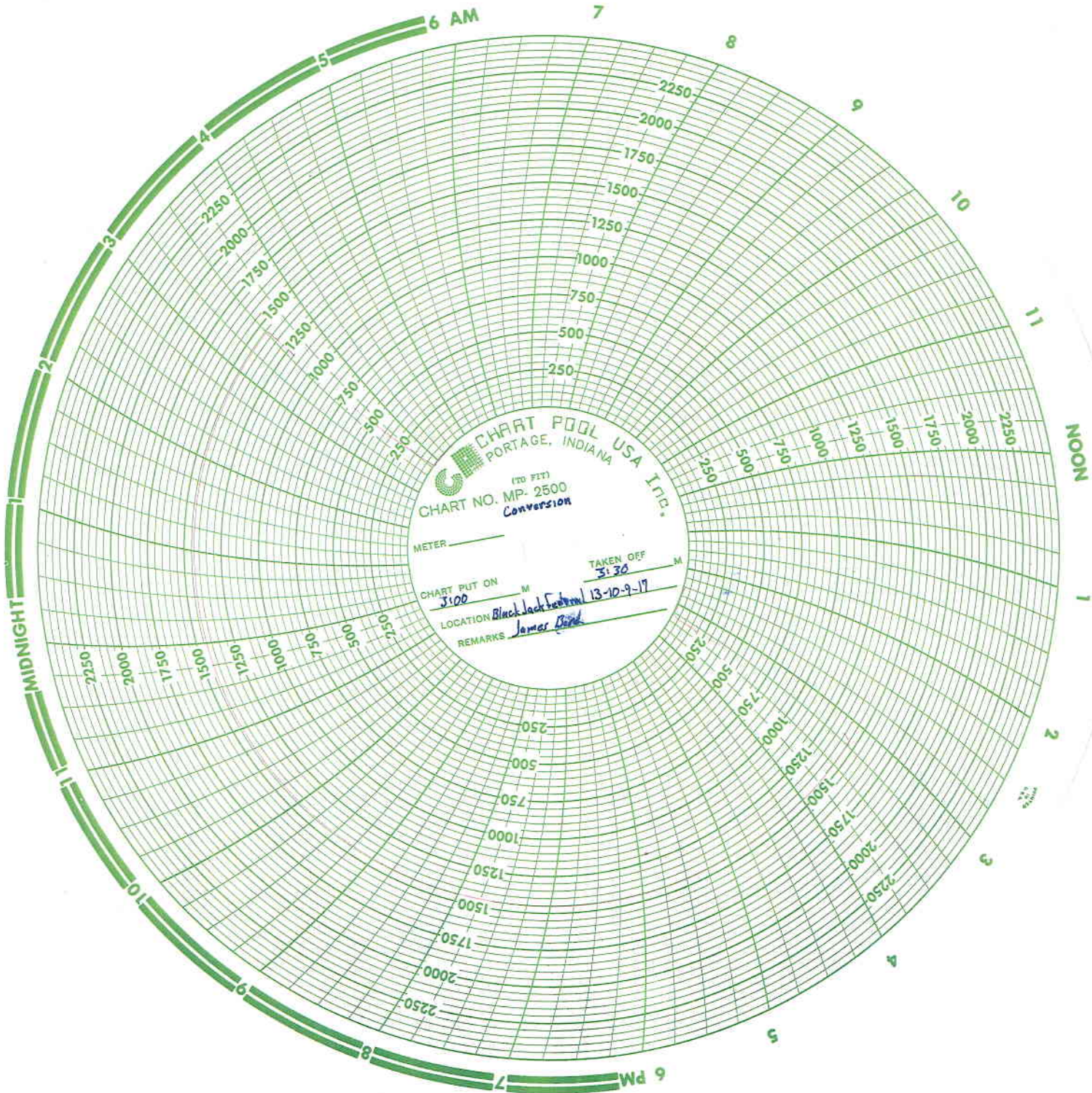
Does the annulus pressure build back up after the test?    ☐ Yes    ☒ No

## MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

Signature of Witness: \_\_\_\_\_





**Daily Activity Report**

Format For Sundry

**BLACKJACK 13-10-9-17****1/1/2010 To 5/30/2010****3/30/2010 Day: 2****Conversion**

Nabors #809 on 3/30/2010 - TOH W/ production tbg. TIH W/ packer & injection string. - MIRU Nabors rig #809. RU HO trk to annulus & pump 60 BW @ 250°F. RU pumping unit & unseat rod pump. Flush tbg & rods W/ 40 BW @ 250°F. Re-seat pump, soft joint rod string & strip off flow-T. Fill tbg W/ 9 BW. Pressure test tbg to 3000 psi. Retrieve rod string & unseat pump. TOH & LD rod string and pump. Re-flushed rods twice more on TOH W/ add'l 30 BW. SIFN. - MIRU Nabors rig #809. RU HO trk to annulus & pump 60 BW @ 250°F. RU pumping unit & unseat rod pump. Flush tbg & rods W/ 40 BW @ 250°F. Re-seat pump, soft joint rod string & strip off flow-T. Fill tbg W/ 9 BW. Pressure test tbg to 3000 psi. Retrieve rod string & unseat pump. TOH & LD rod string and pump. Re-flushed rods twice more on TOH W/ add'l 30 BW. SIFN. - RU HO trk to tbg & flush W/ 30 BW @ 250°F. RIH W/ sandline & tag fill @ 5642'. RD Sdline. TOH & talley production tbg. Break each connection, clean & inspect pins and apply Liquid O-ring to pins. LD btm 28 jts & BHA. MU & TIH W/ new Weatherford 5 1/2" Arrowset 1-X packer (W/ wicker slips & W.L. re-entry guide), new 2 7/8 SN and 145 jts 2 7/8 8rd 6.5# J-55 tbg. Re-torque each connection on TIH. SIFN. - RU HO trk to tbg & flush W/ 30 BW @ 250°F. RIH W/ sandline & tag fill @ 5642'. RD Sdline. TOH & talley production tbg. Break each connection, clean & inspect pins and apply Liquid O-ring to pins. LD btm 28 jts & BHA. MU & TIH W/ new Weatherford 5 1/2" Arrowset 1-X packer (W/ wicker slips & W.L. re-entry guide), new 2 7/8 SN and 145 jts 2 7/8 8rd 6.5# J-55 tbg. Re-torque each connection on TIH. SIFN.

**Daily Cost: \$0****Cumulative Cost: \$55,297**

---

**4/1/2010 Day: 3****Conversion**

Nabors #809 on 4/1/2010 - Pressure test tbg. Pressure test csg & pkr. - RIH w/ sandline & push std valve to SN. RD sandline. Pressure test tbg to 2950 psi w/ 7 bbls water for 30 min. Good test. RU sandline to retrieve std valve. RD sandline. RD rig floor. ND BOP. NU wellhead. Pump 65 bbls fresh water w/ pkr fluid down csg. ND wellhead. Set Pkr w/ 17000 tension. NU wellhead. Pressure test csg & pkr to 1400 psi for 30 min. Good test. RDMOSU. READY FOR MIT!!

**Daily Cost: \$0****Cumulative Cost: \$58,096**

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**4/9/2010 Day: 4****Conversion**

Rigless on 4/9/2010 - MIT on Well - On 3/29/2010 Jason Deardorff with the EPA was contacted concerning the initial MIT on the above listed well (BlackJack 13-10-9-17). On 4/8/2010 the csg was pressured up to 1450 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tbg pressure was 400 psig during the test. There was not an EPA representative available to witness the test. Final Report EPA# UT21226-08345 API#43-013-32504 **Finalized**

**Daily Cost: \$0****Cumulative Cost: \$58,396**

---

**Pertinent Files: Go to File List**





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

1595 Wynkoop Street  
DENVER, CO 80202-1129  
Phone 800-227-8917  
<http://www.epa.gov/region08>

APR 30 2010

Ref: 8P-W-GW

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Mr. Michael Guinn  
District Manager  
Newfield Production Company  
Route 3 – Box 3630  
Myton, UT 84052

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
**FOR RECORD ONLY**

RE: Underground Injection Control (UIC)  
Limited Authorization to Inject  
EPA UIC Permit UT21226-08345  
Blackjack Federal 13-10-9-17  
SWSW Sec. 10-T9S-R17E  
Duchesne County, Utah  
API No.: 43-013-32504

Dear Mr. Guinn:

The Environmental Protection Agency Region 8 (EPA) has received Newfield Production Company's (Newfield) February 2, 2010, letter with enclosures. The enclosed Part I (internal) Mechanical Integrity test, Well Rework Record (EPA Form 7520-12), schematic diagram, and calculated pore pressure were reviewed and approved by EPA, satisfactorily completing all Prior to Commencing Injection Requirements for UIC Permit UT21226-08345.

As of the date of this letter, Newfield is authorized to commence injection into the Blackjack Federal 13-10-9-17 well at a Maximum Allowable Injection Pressure (MAIP) of 1,315 psig for a limited period of 180 days, during which time a Radioactive Tracer Survey (RTS) is required. If Newfield seeks a higher MAIP than 1,315 psig, it may be advantageous to run a step rate test prior to conducting the RTS because a RTS conducted at the higher MAIP will be required. Newfield must receive prior authorization from the Director to inject at pressures greater than the permitted MAIP during any test.

Please remember that it is Newfield's responsibility to be aware of and to comply with all conditions of Permit UT21226-08345.

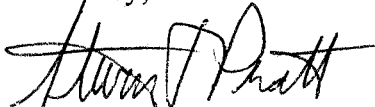
**RECEIVED**

**MAY 12 2010**

**DIV. OF OIL, GAS & MINING**

If you have questions regarding the above action, please call Emmett Schmitz at 303-312-6174 or 1-800-227-8917, ext. 312-6174. The RTS log with interpretation should be mailed to Emmett Schmitz at the letterhead address, citing mail code 8P-W-GW.

Sincerely,



for Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

cc: Uintah & Ouray Business Committee:

Curtis Cesspooch, Chairman  
Ronald Groves, Councilman  
Irene Cuch, Vice-Chairwoman  
Steven Cesspooch, Councilman  
Phillip Chimburas, Councilman  
Frances Poowegup, Councilwoman

Daniel Picard  
BIA - Uintah & Ouray Indian Agency

Ferron Secakuku  
Director, Natural Resources  
Ute Indian Tribe

Larry Love  
Director of Energy & Minerals Dept.  
Ute Indian Tribe

Gil Hunt  
Associate Director  
Utah Division of Oil, Gas, and Mining

Fluid Minerals Engineering Office  
BLM - Vernal Office

Eric Sundberg, Regulatory Analyst  
Newfield Production Company

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER		5. LEASE DESIGNATION AND SERIAL NUMBER: USA UTU-70821
2. NAME OF OPERATOR: NEWFIELD PRODUCTION COMPANY		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: Route 3 Box 3630 CITY Myton STATE UT ZIP 84052		7. UNIT or CA AGREEMENT NAME: GMBU
4. LOCATION OF WELL: FOOTAGES AT SURFACE: 308 FSL 692 FWL		8. WELL NAME and NUMBER: BLACKJACK FEDERAL 13-10-9-17
5. OTR/OTR. SECTION. TOWNSHIP. RANGE. MERIDIAN: SWSW, 10, T9S, R17E		9. API NUMBER: 4301332504
		10. FIELD AND POOL, OR WILDCAT: GREATER MB UNIT
		COUNTY: DUCHESNE
		STATE: UT

CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will 06/03/2010	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input checked="" type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION (START/STOP) <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLAIR <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUT-OFF <input checked="" type="checkbox"/> OTHER: - Put on Injection
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of Work Completion:			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The above reference well was put on injection at 12:30 PM on 06-03-2010.

EPA # UT21226-08345 API # 43-013-32504

NAME (PLEASE PRINT) Lucy Chavez-Naupoto

TITLE Administrative Assistant

SIGNATURE

DATE 06/03/2010

(This space for State use only)

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JUN 07 2010

DIV. OF OIL, GAS & MINING

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**SUBMIT IN TRIPLICATE - Other Instructions on page 2**

1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
NEWFIELD PRODUCTION COMPANY

3a. Address Route 3 Box 3630  
Myton, UT 84052

3b. Phone (include area code)  
435.646.3721

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
308 FSL 692 FWL  
SWSW Section 10 T9S R17E

5. Lease Serial No.

USA UTU-70821

6. If Indian, Allottee or Tribe Name.

7. If Unit or CA/Agreement, Name and/or  
GMBU

8. Well Name and No.

BLACKJACK FEDERAL 13-10-9-17

9. API Well No.

4301332504

10. Field and Pool, or Exploratory Area

GREATER MB UNIT

11. County or Parish, State

DUCHESNE, UT

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug & Abandon	<input type="checkbox"/> Temporarily Abandon	Put on Injection _____
	<input checked="" type="checkbox"/> Convert to Injector	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	_____

13. Describe Proposed or Completed Operation: (Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

The above reference well was put on injection at 12:30 PM on 06-03-2010.

EPA # UT21226-08345 API # 43-013-32504

I hereby certify that the foregoing is true and correct (Printed/ Typed)

Lucy Chavez-Naupoto

Signature

Title

Administrative Assistant

Date

06/03/2010

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious and fraudulent statements or representations as to any matter within its jurisdiction

(Instructions on page 2)

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-70821
<b>1. TYPE OF WELL</b> Water Injection Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> NEWFIELD PRODUCTION COMPANY		<b>7. UNIT or CA AGREEMENT NAME:</b> GMBU (GRRV)
<b>3. ADDRESS OF OPERATOR:</b> Rt 3 Box 3630 , Myton, UT, 84052		<b>8. WELL NAME and NUMBER:</b> BLACKJACK FED 13-10-9-17
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0308 FSL 0692 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSW Section: 10 Township: 09.0S Range: 17.0E Meridian: S		<b>9. API NUMBER:</b> 43013325040000
<b>PHONE NUMBER:</b> 435 646-4825 Ext		<b>9. FIELD and POOL or WILDCAT:</b> MONUMENT BUTTE
<b>COUNTY:</b> DUCHESNE		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 3/16/2015	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE WELL NAME	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input checked="" type="checkbox"/> OTHER	
	OTHER: <input type="text" value="5 YR MIT"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. 5 YR MIT performed on the above listed well. On 03/16/2015 the casing was pressured up to 1088 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tbq pressure was 1418 psig during the test. There was not an EPA representative available to witness the test. EPA #UT22197-08345		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> March 18, 2015		
<b>NAME (PLEASE PRINT)</b> Lucy Chavez-Naupoto	<b>PHONE NUMBER</b> 435 646-4874	<b>TITLE</b> Water Services Technician
<b>SIGNATURE</b> N/A	<b>DATE</b> 3/17/2015	

## Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency  
Underground Injection Control Program  
999 18<sup>th</sup> Street, Suite 500 Denver, CO 80202-2466

EPA Witness: \_\_\_\_\_

Date: 3 / 16 / 15Test conducted by: R. Ly B. Ly

Others present: \_\_\_\_\_

Well Name: <u>Black Jack Ferry</u>	Type: <u>ER SWD</u>	Status: <u>AC TA UC</u>
Field: <u>Mohave B-HC</u>		
Location: <u>2813</u> Sec: <u>10</u> T <u>9</u> N/S R <u>17</u> E/W County: <u>Duchane</u> State: <u>UT</u>		
Operator: <u>R. Ly B. Ly</u>		
Last MIT: <u>1</u> / <u>1</u>	Maximum Allowable Pressure: _____	PSIG

Is this a regularly scheduled test?

☒ Yes ☐ No

Initial test for permit?

☐ Yes ☒ No

Test after well rework?

☐ Yes ☒ No

Well injecting during test?

☐ Yes ☒ No

If Yes, rate: \_\_\_\_\_ bpd

Pre-test casing/tubing annulus pressure: 0 / 1421 psig

## MIT DATA TABLE

	Test #1	Test #2	Test #3
<b>TUBING PRESSURE</b>			
Initial Pressure	<u>1421</u> psig	psig	psig
End of test pressure	<u>1418</u> psig	psig	psig
<b>CASING / TUBING ANNULUS PRESSURE</b>			
0 minutes	<u>1086</u> psig	psig	psig
5 minutes	<u>1087</u> psig	psig	psig
10 minutes	<u>1087</u> psig	psig	psig
15 minutes	<u>1087</u> psig	psig	psig
20 minutes	<u>1088</u> psig	psig	psig
25 minutes	<u>1088</u> psig	psig	psig
30 minutes	<u>1088</u> psig	psig	psig
_____ minutes	psig	psig	psig
_____ minutes	psig	psig	psig
<b>RESULT</b>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Does the annulus pressure build back up after the test ? ☐ Yes ☒ No

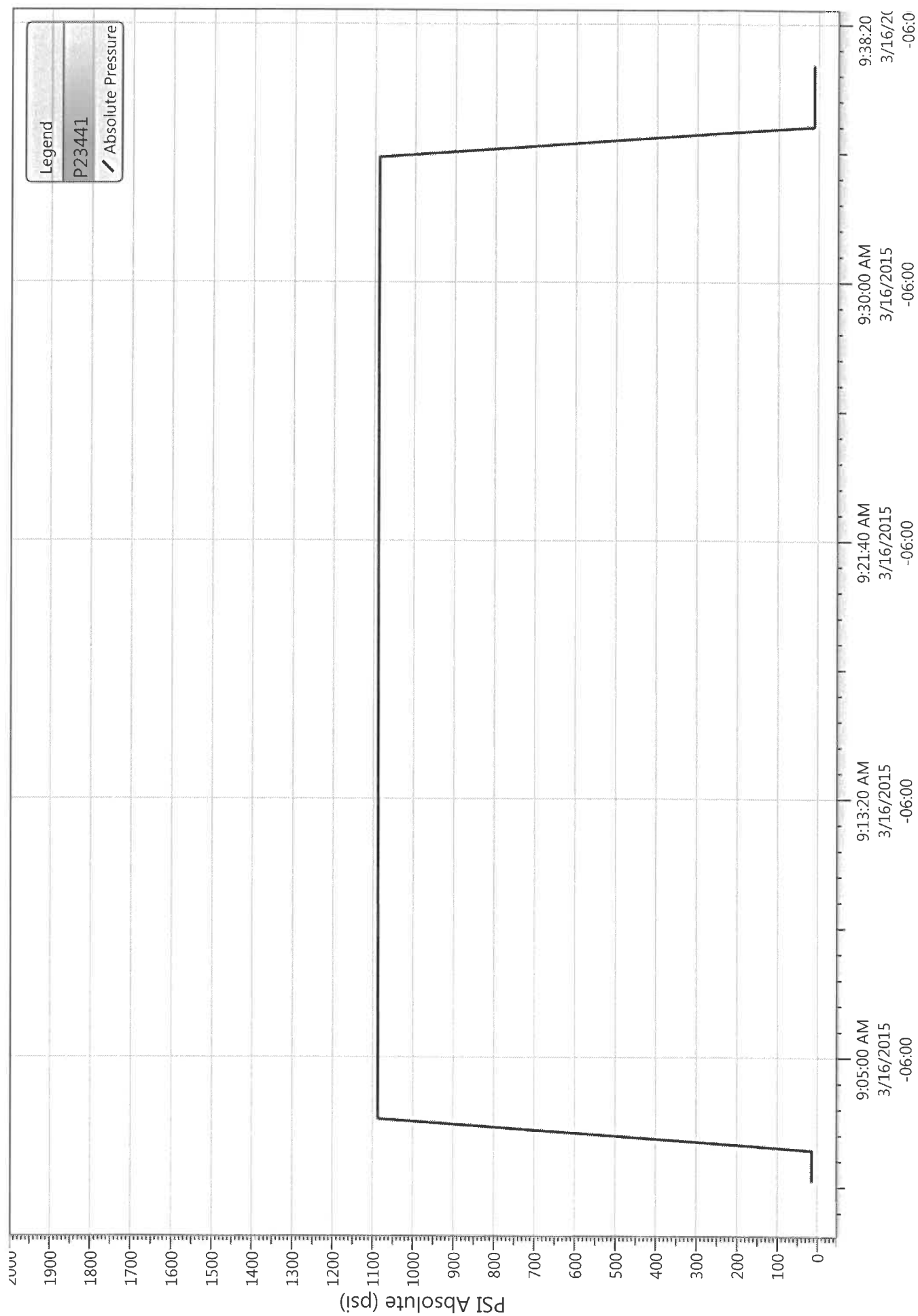
## MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

Signature of Witness: \_\_\_\_\_

Blackjack federal 13-10-9-17 (5 year MIT 3/16/15)

3/16/2015 9:00:05 AM



# Blackjack Federal 13-10-9-17

Spud Date: 7/29/2004

Put on Production: 9/7/2004

GL: 5210' KB: 5222'

## Injection Wellbore Diagram

### SURFACE CASING

CSG SIZE: 8-5/8"

GRADE: J-55

WEIGHT: 24#

LENGTH: 7 jts (290.9')

DEPTH LANDED: 300.9' KB

HOLE SIZE: 12 1/4"

CEMENT DATA: 150sxs Class "G" mixed cmt, est 3 bbls cmt to surf.

### PRODUCTION CASING

CSG SIZE: 5-1/2"

GRADE: J-55

WEIGHT: 15.5#

LENGTH: 135 jts (5715.99')

DEPTH LANDED: 5713.99' KB

HOLE SIZE: 7 7/8"

CEMENT DATA: 350 sxs Prem. Lite II mixed & 450 sxs 50/50 POZ mix.

CEMENT TOP AT: 140'

### TUBING

SIZE GRADE/WT.: 2-7/8" / J-55 / 6.5#

NO. OF JOINTS: 145 jts (4660.2')

SEATING NIPPLE: 2-7/8" (1.10')

SN LANDED AT: 4672.2' KB

CE @ 4677.01'

TOTAL STRING LENGTH: EOT @ 4681' w/ 12' KB

### FRAC JOB

8/27/04

Frac CP5 sands as follows:  
Decision made to skip Stage #1

8/31/04 5503-5513'

Frac CP4 sands as follows:  
29,479# 20/40 sand in 322 bbls lightning Frac 17 fluid. Treated @ avg press of 1590 psi w/avg rate of 24.8 BPM. ISIP 1590 psi. Calc flush: 5501gal. Actual flush: 5502 gal

8/31/04 5308-5387'

Frac CP2, CP1 & CP.5 sands as follows:  
95,060# 20/40 sand in 692 bbls lightning Frac 17 fluid. Treated @ avg press of 1555 psi w/avg rate of 24.9 BPM. ISIP 1700 psi. Calc flush: 5306 gal. Actual flush: 5305 gal

9/1/04 4980-4990'

Frac A3 sands as follows:  
60,000# 20/40 sand in 480 bbls lightning Frac 17 fluid. Treated @ avg press of 1345 psi w/avg rate of 24.9 BPM. ISIP 1600 psi. Calc flush: 4978 gal. Actual flush: 4977 gal.

9/1/04 4709-4719'

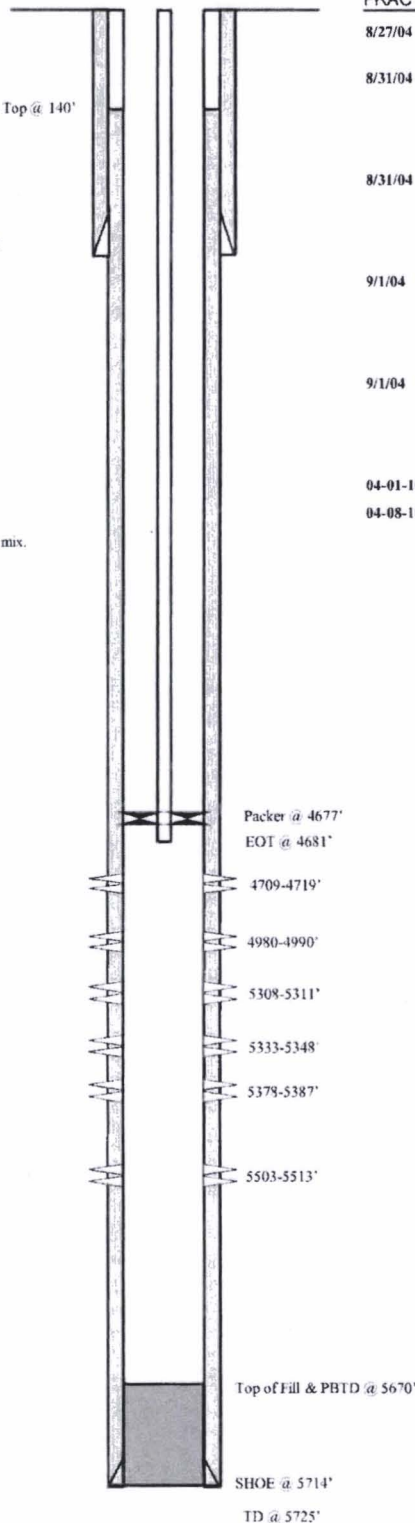
Frac B.5 sands as follows:  
46,766# 20/40 sand in 403 bbls lightning Frac 17 fluid. Treated @ avg press of 1620 psi w/avg rate of 24.8 BPM. ISIP 1775 psi. Calc flush: 4707 gal. Actual flush: 4624 gal.

04-01-10

Convert to Injection well

04-08-10

MIT completed - tbg detail updated



### PERFORATION RECORD

8/27/04	5503-5513'	4 JSPF	40 holes
8/31/04	5378-5387'	4 JSPF	36 holes
8/31/04	5333-5348'	4 JSPF	60 holes
8/31/04	5308-5311'	4 JSPF	12 holes
8/31/04	4980-4990'	4 JSPF	40 holes
9/01/04	4709-4719'	4 JSPF	40 holes

## NEWFIELD

Blackjack Federal 13-10-9-17

308' FSL & 692' FWL

SW SW Section 10-T9S-R17E

Duchesne County, Utah

API #43-013-32504; Lease #UTU-70821

LCN 04-12-10